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ABSTRACT

This teacher's guide was developed for the second of four courses in Valencia Community College's Interdisciplinary Studies Program, a 2-year core general education curriculum which chronologically examines the major developments in the evolution of human knowledge. The guide provides an introductory overview of the semester's topic (i.e., the foundations of modern thought laid in the Medieval period, Renaissance, Reformation and Counter-Reformation); introduces each unit; discusses each topic within each unit, including information on methodology and main points to be stressed; and provides student papers showing the work in each unit. The units of the course are: (1) A Theological World View, which includes an introduction to Judeo-Christian religion and its influence on Western culture during the Medieval period; (2) Theological Humanism, which traces the birth and development of the Renaissance; (3) Religious Backlash--Scientific Progress, which looks at the Protestant Reformation through the eyes of Martin Luther and the Catholic Counter-Reformation through the eyes of St. Teresa de Avila and St. Ignatius Loyola, and considers the scientific discoveries of the day; (4) The Old State vs. The New State, during which the study of the complete texts of "The Prince," by Machiavelli; "Macbeth," by Shakespeare; "Candide," by Voltaire; and "Second Treatise on Government," by John Locke introduce students to various aspects of government; and (5) Science Creates a New World, which includes the philospohy and discoveries of Descartes, Bacon, and Newton. (AYC)

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TEACHER'S GUIDE

PART II

Interdisciplinary Studies Program
Valencia Community College
Orlando, Florida

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JC 840 392

Chairman: J. Louis Schlegel, III

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SEMESTER II

CONTENT

The theme of Semester II is the second revolution in Western consciousness--the scientific revolution of the 16th and 17th centuries when the foundations of modern thought were laid. Semester II begins by examining the theological world view of the Medieval period so that students may understand the impact that the Renaissance had on European thought. After examining the Renaissance and the rebirth of Greek idealism, students study the backlash movements, the Reformation and Counter-Reformation. At the same time that the religious reform movements rejecting many of the Renaissance ideals, scientists are inquiring into the unknown, moving knowledge forward in accordance with those Renaissance ideals. Students examine the old concept of state, monarchy, and compare it to the new concept of state, democracy. Finally, students study the full fruition of this early scientific work in the principles of physics laid down by Sir Isaac Newton. The Newtonian synthesis both sums up the scientific revolution of the 16th and 17th centuries and propels man forward into a new age in which science supplants religion as Europe's well-spring of values.

This content is divided into five units. Unit I, "A Theological World View," looks at the Medieval period. Students are introduced first to the idea of an omniscient and omnipotent god through reading excerpts from "The Book of Job." This is followed by excerpts from Paul's "Epistle to the Romans" which introduces them to the Christian concept of God. Excerpts from St. Augustine's _City of God_ move them from the early Christian to a Medieval view of god. A lecture on the economics of the feudal system emphasizes how this system contributed to god's exalted position and man's debased one. This view is, in turn, re-emphasized by a slide lecture on Medieval religious art and listening to examples of Medieval music. The topics covered in Unit I are:

Theological World View (Introduction)
The Book of Job
The Apostle Paul
The Epistle of Paul to the Romans
Religion and Western Culture
Saint Augustine
The City of God
Early Christian and Medieval Art
Te Deum Laudamus

Unit II, "Theological Humanism," traces the birth and development of the Renaissance. It begins by examining Peter Abelard's emphasis on reason and St. Thomas Aquinas' attempt to synthesize faith and reason. A lecture on the development of European capitalism underscores the idea that economic changes produce intellectual changes and explains why people felt the need to shift from faith to reason. Developments in Renaissance architecture and sculpture, when they are compared to earlier Medieval examples, demonstrate this shift of emphasis. "The Oration on the Dignity of Man" by Pico della Mirandola presents the new, Renaissance world view, theological humanism. The influence of this work is then traced through the painting of Botticelli, Leonardo da Vinci and Michelangelo. The birth of science in the time is examined in the work of Nicolas Copernicus (De Revolutionibus) and da Vinci. The topics covered in Unit II are:

Peter Abelard
Abelard and Heloise
Summa Contra Gentiles
The Renaissance - An Overview
Mathematics and Painting in the Renaissance
Giovanni Pico della Mirandola
"Oration on the Dignity of Man"
Michelangelo: The Last Giant (film)
The Sistine Chapel Ceiling
Sonnets by Michelangelo
Nicolaus Copernicus
De Revolutionibus Orbium Caelestium
Leonardo da Vinci
Tell Me If Anything Was Ever Done (film)

Unit III, "Religious Backlash--Scientific Progress," looks at the Protestant Reformation through the eyes of Martin Luther, and at the Catholic Counter-Reformation through the eyes of St. Teresa de Avila and St. Ignatius Loyola. The Protestant emphasis on music, culminating in the work of Bach, is contrasted to the Catholic emphasis on architecture, sculpture and painting which culminates in St. Peter's Basilica. At the same time that students study the religious backlash, they also study the scientific discoveries of the day and see how intimately the two are related historically while they are, at the same time, so diametrically opposed. They study the three laws of planetary motion discovered by Johannes Kepler, and learn that he was persecuted by the Protestant reformers and then study Galileo's famous work in early physics and learn of his persecution by the Inquisition. The topics covered in Unit III are:

The Reformation
Martin Luther
"Ninety-Five Theses"
"The Freedom of a Christian"
Johannes Kepler
Kepler's Science
"The Harmony of the Spheres" ("Cosmos" episode)
The Counter-Reformation
"Spiritual Exercises"
Autobiography of St. Teresa of Avila
"Grandeur and Obedience" (Program 7 of "Civilization")
Galileo Galilei
"Letter to the Grand Duchess Christina"
Galileo's Science
Galileo by Bertold Brecht (film)

Unit IV, "The Old State vs. The New State," introduces students to the study of several complete works. First, they read Machiavelli's The Prince and examine the ideals of the old form of government, monarchy. Then they read "Macbeth" by Shakespeare to see what happens to a prince who rules unwisely. They also see Roman Polanski's filmed version of introduces them to film as an artistic medium. Next they read "Candide" by Voltaire which shows the decadence of the old state and Voltaire's contempt for it compared to the democratic theories emanating from England. Lastly, students examine John Locke's "Second Treatise on Government" as the birth of the new, democratic concept of state. The topics covered in Unit IV are:

"The Princes and the Powers of the Italian Renaissance"
The Prince
"Macbeth" by Shakespeare
Candide by Voltaire
Candide (videocassette)
John Locke
"An Essay Concerning the True and Original Extent and End of Civil Government"

Unit V, "Science Creates a New World View," covers the philosophy and mathematic discoveries of Rene Descartes, the emphasis on empiricism fostered by Sir Francis Bacon and the culmination of classical science in the work of Newton. The topics covered in Unit V are:

Introduction: René Descartes
"Discourse on Method"
Sir Francis Bacon
Novum Organum
Perspectives: Newtonian Synthesis
Newton's Preface to the First Edition of the Principia Mathematica
General Scholium of the Principia
Scholium of the Principia
Newton's Science

SKILLS AND COMPETENCIES

Semester II continues to emphasize all of the competencies emphasized in Semester I. However, this semester students are expected to demonstrate a higher level of mastery than in Semester I. To this end, students are introduced to longer and more difficult readings. Several works are examined in their entirety. Students are asked to master more complicated writing skills. They now write essays in which they must formulate and state clearly complicated theses which they support with examples drawn from an interdisciplinary spectrum. They must write conclusions which demonstrate their ability to analyze and draw logical inferences. They write one lengthy paper in which they must critically analyze four complete works and compare and contrast them (Unit IV, "The Old State vs. The New State.")

During this semester, more emphasis is placed on interpreting the visual arts than was placed in Semester I. Students learn to observe carefully painting, sculpture, architecture and film and to draw inferences from their observations.

Also, more emphasis is placed on developing an awareness of a historical continuum between past and present and on learning to see history as an economic-social-cultural pattern.

None of this is new to the students since all of these ideas were introduced in Semester I. However, in Semester II these skills are emphasized and refined. Focus shifts from developing reading, thinking, speaking and writing skills to practicing these skills.

In addition to this, students are introduced to three new competencies:

#9. The ability to translate from one form of expression to another.
#10. The ability to understand and use ratio reasoning.
#11. The ability to understand the relationships and principles within a formula and draw inferences from it without performing a numerical calculation.

These competencies are introduced via the scientific developments of this period.

All of these things are possible because students show greater maturity, are more self-disciplined and more confident of their abilities than they were in Semester I.

TESTING

Students are tested in a variety of ways in Semester II. At the end of Units I, II, III & IV they have an in-class essay test. During Units II & III they also have several short, objective quizzes. The lengthy critical analysis, comparison-contrast paper comes after the end of Unit IV. Quiz scores are added together to equal one test score. The final grade is determined by first averaging the content grade on the various tests and then averaging this grade with the student's progress in mechanics.

UNIT I: A THEOLOGICAL WORLD VIEW

DESCRIPTION OF THE UNIT:

An introductory lecture examines the characteristics of a world view which has its origin in theology and more specifically, Judaeo-Christian theology. Students then read and discuss "The Book of Job" in light of these characteristics. A lecture on the Apostle Paul and early Christianity is followed by a discussion of excerpts of his "Epistle to the Romans." A lecture on the economic/historic changes which produced the Middle Ages is followed by excerpts from Augustine's City of God, which represents the development of Medieval Christianity. A slide lecture on Medieval art and architecture and listening to Medieval music helps students visualize the full effects of a theological world view. The unit is closed by a student panel discussion in which panelists reviewed the major points of each topic.
Time: 13½ hours.

OBJECTIVES:

1. To define a theological world view, a world view based on faith and theology rather than reason and philosophy;

2. To develop the ideas prevalent in the theological world view which dominated Medieval Christianity;

3. To introduce student to writing an essay with a complex thesis (main theme and a sub-set of related concepts), diverse supporting examples and a thoughtful conclusion;

4. To give background necessary for understanding the change in thinking represented by the Renaissance and its scientific revolution;

5. To study three classic religious writers: the author(s) of "Job," Paul and Augustine;

6. To give background in theology necessary for understanding the religious reform movements of the 16th and 17th centuries as well as contemporary religious reform movements such as Fundamentalism in the 1970's and '80s;

7. To expose students to two different translations of the Bible.

CONTENT:

1. Theological World View (introduction)
2. The Book of Job (excerpts)
3. The Apostle Paul (introduction)
4. The Epistle of Paul to the Romans (excerpts)
5. Religion and Western Culture
6. Saint Augustine (introduction)
7. The City of God (excerpts)
8. Early Christian Art
9. Te Deum Laudamus

COMPETENCIES DEVELOPED:

#1, 2, 3, 5, 7, 8, 9, 13, 14, 15, 17 & 18.

TESTING/EVALUATION:

Directions for a comprehensive essay examination are given to the students two weeks before the due date so that they can carefully prepare for the test. This essay test asks them to define a theological world view, then to take the most important features of that view and relate them to one of the three writers they have studied. This is an in-class examination and while they know what they will be asked to do, they do not know prior to the test which writer they will be assigned. Giving the directions well in advance of the exam, lets students know how to organize their studying. It is emphasized that the worksheets they are preparing on each reading leads them through the first steps of studying the material for the test.

REACTIONS/SUGGESTIONS:

The unit is successful, no changes are planned.

IDS 1102
Unit I
Test Directions

STUDY GUIDE AND DIRECTIONS FOR UNIT I TEST

The test for Unit I will be an in-class essay composed of the three parts of a traditional essay: a thesis statement, supporting body paragraphs, and a conclusion. These parts are outlined in greater detail below.

The Thesis Statement:

Construct a definition of a theological world-view. Use the information from your lecture notes and your notes on class discussion, as well as any of your own insights that are appropriate. This definition will help form the thesis statement of your essay and will probably be several paragraphs long.

After you have constructed this definition, prepare a brief outline of it on the form provided. This outline should contain words and phrases only and not exceed the space allotted on the form. You will be using this form during the test.

Supporting Body Paragraphs:

Re-examine each of the three topics covered in this unit, "Job," Paul and Augustine. From these writings, select two or three significant passages which represent the main ideas of the writer and which respond to some aspect(s) of the theological world-view you have defined above. Write these passages in the appropriate spaces on the form.

Be prepared to use these passages to construct the body paragraphs of your essay. In constructing your body paragraphs you should be prepared to:

(1) Introduce the title (& author) of the work being discussed and state its main idea. (Assume an ignorant reader.)

(2) Introduce each passage you have selected by first giving its context followed by the passage itself, then the interpretation of the passage, and finally by explaining how this passage relates to your definition of a theological world-view.

Conclusion:

In your conclusion, you will be asked to draw inferences about the role of the individual and society in the theological world-view of the writer you have discussed in your supporting body paragraphs. Therefore to prepare for the test you will have to prepare three possible conclusions (although you will only use one of them). Your conclusions should answer the following questions:

(1) What role or purpose does the individual have in the theological world-view of the writer you have discussed? In this view, how do individuals receive their direction in life? How are they supposed to act?

For example: According to the "Book of Job," what is the purpose of an individual's life? etc.

(2) Discuss one or two institutions which would be developed by a society to assist individuals in achieving this theological world-view. What activities would these institutions encourage?

When you have prepared your conclusions, transfer a few brief notes about them to the form. (Use words and phrases only.)

Schematic of the essay:

THESIS STATEMENT	Statement that focuses on one idea and generalizes the over-all intent of the essay.
	Paragraph introducing the first set of ideas in your definition of a theological world-view
	Paragraph (or series of paragraphs) which complete the definition (Transition)
BODY PARAGRAPHS	Introduction of topic for body paragraph Paragraph containing first passage (context, passage, interpretation & relationship) Paragraph containing second passage (ditto above) (Paragraph containing third passage ---- etc.) (Transition)
CONCLUSION	First paragraph of conclusion - individual Second paragraph of conclusion - society

Grading your essay:

Your essay will be graded on your knowledge of the material covered in this unit, your ability to organize your knowledge effectively, and the clarity with which you express your knowledge. In assessing these factors, your Beta leader will consider: your quotation selection, the breadth and depth of your knowledge of the reading assignment(s), the breadth and depth of your knowledge of class discussion and your ability to draw logical inferences and use personal insights.

IDS 1102
Unit 1
Test Form

NAME ____________________

DIRECTIONS:

A. DO NOT EXCEED SPACE ALLOTTED ON THIS FORM.
B. Use only words and phrases in #1 & #3.
C. Staple this form to the back of your essay.

1. Brief outline of thesis statement:

2. Passages from "The Book of Job":

____
____
____
____
____
____
____

Passages from the writings of Paul (include title of work):

____
____
____

Passages from the writing of Augustine (Include title of work):

3. Notes for conclusion(s):

"Job":

Paul:

Augustine:

A THEOLOGICAL WORLD VIEW: INTRODUCTION

RATIONALE FOR TOPIC:

While this unit examines the Judaeo-Christian theological world view, there is in it a pattern common to all world views based on the idea of a creator and a creation. This introduction defines the basic characteristics of this common pattern and more specifically, the Judaeo-Christian world view.

DESCRIPTION OF LEARNING ACTIVITY:

Students meet in the large group for a lecture/discussion. This activity helps students develop competencies #1, 5, 15, 16 & 18.
Time: 1½ hours.

READING ASSIGNMENT:

"Theological World View" from "Perspectives: Religion" in *Mirrors of Mind: An Interdisciplinary Overview* by Roberts et. al. Winston-Salem, N.C.: Hunter Textbooks, 1980, pp. 163-164.

MAIN IDEAS STRESSED:

1. A religious world view posits a creator and a creation. The creator is the origin of all. There is nothing prior to this creation, nothing hence.

2. The attributes of a creator:
   - omniscience
     Can a person (creation) know all?
     What is infinite knowledge?
   - omnipresence
     Can there be a presence separate from God's presence?
   - omnipotence
     Can free will exist?
     What is predestination?

3. The dichotomy: finite vs. infinite:

finite	infinite
tangible	intangible?
end point	eternal
sensory	metaphysical
beginning	absurdity

4. The dichotomy: faith vs. reason:

faith	reason
beyond reason	logic
belief in absurd	experience
can't be rationally demonstrated	limited to finite

5. "The Book of Job" is an examination of man's attempt to use reason and his realization of its limits.

6. Questions to discuss:
   - Within a theological world view what would a society perceive as its role? an individual?
   - Where would a society get its sense of direction? an individual?

REACTION/SUGGESTIONS:

The lecture went well, no changes are proposed.

THEOLOGICAL WORLD VIEW: THE BOOK OF JOB

RATIONALE FOR TOPIC:

"The Book of Job" is an excellent example of the characteristics of a theological world view as outlined in the introductory lecture as well as a classic religious writing.

DESCRIPTION OF LEARNING ACTIVITY:

Students meet in small discussion groups to examine the key ideas and passages in "Job" and to relate these to a theological world view. Students prepare for this discussion by completing a worksheet. (A copy follows.) This activity helps students develop competencies #1, 2, 3, 5, 7, 8, 15, 17 & 18.
Time: 1 hour 15 minutes

READING ASSIGNMENT:

Excerpts from "The Book of Job" in The New English Bible, New York: Oxford University Press, 1971, pp. 560-610.

This translation was selected because of the beauty of its poetry and the clarity of its organization.

MAIN IDEAS STRESSED:

A. From the reading:

1. Job's position at the opening of the work reflects his rational understanding of God. Yet in it, he recognized his finiteness and affirms his righteousness.

> Why should the sufferer be born to see the light?
> Why is life given to men who find it so bitter?. . .
> Why should a man be born to wander blindly,
> hedged in by God on every side? (9)
>
> O that the grounds for my resentment
> might be weighed,
> and my misfortunes set with them on
> the scales! (10)
>
> No doubt you are perfect men
> and absolute wisdom is yours!
> But I have sense as well as you;
> in nothing do I fall short of you;
> what gifts indeed have you that others have not?
> Yet I am a laughing-stock to my friends --
> a laughing-stock, though I am innocent and blameless,
> one that called upon God, and he answered.
> Prosperity and ease look down on misfortune, (12)

Be sure of this: once I have stated my case
I know that I shall be acquitted. (13)

I put on righteousness as a garment and it clothed me;
justice, like a cloak of a turban, wrapped me round
I was eyes to the blind
and feet to the lame;
I was a father to the needy,
and I took up the stranger's cause.
I broke the fangs of the miscreant
and rescued the prey from his teeth.
I thought, 'I shall die with my powers unimpaired
and my days uncounted as the grains of sand,
with my roots spreading out to the water
and the dew lying on my branches,
with the bow always new in my grasp
and the arrow ever ready to my hand.'...
I swear I have had no dealings with falsehood
and have not embarked on a course of deceit.
I have come to terms with my eyes,
never to take notice of a girl.
Let God weigh me in the scales of justice.
and he will know that I am innocent!
Let me but call a witness in my defence!
Let the Almighty state his case against me! (15)

2. Each of Job's friends offers Job conventional wisdom as a rationale for his suffering. However, Job desired a personal confrontation with God.

Eliphaz the Temanite:

For consider, what innocent man has ever perished?
Where have you seen the upright destroyed?
This I know, that those who plough mischief and sow trouble
reap as they have sown; (10)

Bildad the Shuhite:

Does God pervert judgment?
Does the Almighty pervert justice?
Your sons sinned against him,
so he left them to be victims of their own iniquity.
If only you will seek God betimes
and plead for the favour of the Almighty,
if you are innocent and upright,
then indeed will he watch over you
and see your just intent fulfilled. (11)

Zophar the Naamathite:

> (Know then that God exacts from you less than your sin deserves.)
> Can you fathom the mystery of God,
> can you fathom the perfection of the Almighty?
> It is higher than heaven; you can do nothing.
> It is deeper than Sheol; you can know nothing.
> Its measure is longer than the earth
> and broader than the sea.
> If he passes by, he may keep secret his passing;
> if he proclaims it, who can turn him back?
> He surely knows which men are false,
> and when he sees iniquity, does he not take note of it? (12)

3. Job's discussion of God's unfathomable wisdom sets forth the idea that while the accomplishments of man are many, God is infinite. Human wisdom is finite.

> But where can wisdom be found?
> And where is the source of understanding?
> No man knows the way to it;
> it is not found in the land of living men.
> Where then does wisdom come from,
> and where is the source of understanding?
> No creature on the earth can see it,
> and it is hidden from the birds of the air.
> Destruction and death say,
> 'We know of it only by report'
> But God understands the way to it,
> he alone knows its source;
> for he can see to the ends of the earth
> and he surveys everything under heaven. (14)

4. Elihu, the young know-it-all, provides an almost comic relief.

> Come now, Job, listen to my words
> and attend carefully to everything I say.
> Look, I am ready to answer;
> the words are on the tip of my tongue.
> My heart assures me that I speak with knowledge,
> and that my lips speak with sincerity.
> For the spirit of God made me,
> and he, breath of the Almighty, gave me life.
> Answer me if you can,
> marshal your arguments and confront me.
> Well, this is my answer: You are wrong.
> God is greater than man; (16)

5. God's questioning of Job leads Job to understand the meaning of infinity and the inadequacy of human reason. Job's understanding is reflected in his final speech.

> Then Job answered the Lord:
> I know that thou canst do all things
> and that no purpose is beyond thee.

> But I have spoken of great things which I have not understood,
> things too wonderful for me to know.
> I knew of thee then only by report,
> but now I see thee with my own eyes.
> Therefore I melt away;
> I repent in dust and ashes. (17)

6. "The Book of Job" is full of excellent poetry. For example:

> If a tree is cut down,
> there is hope that it will sprout again
> and fresh shoots will not fail.
> Though its roots grow old on the earth,
> and its stump is dying in the ground,
> if it scents water it may break into bud
> and make new growth like young plant.
> But a man dies, and he disappears;
> man comes to his end, and where is he?
> As the waters of a lake dwindle
> or as a river shrinks and runs dry,
> so mortal man lies down, never to rise
> until the very sky splits open.
> If a man dies, can he live again?
> He shall never be roused from his sleep. (13)

B. From the discussion:

1. Job's courage is a part of Job's conviction that man should have a personal relationship to God, on an individual basis. None of Job's friends have this.

2. Are Job's friends really friends?

REACTION/SUGGESTIONS:

Students enjoy "Job". Religious students are excited to find new meanings in the story -- new dimensions of faith.

THEOLOGICAL WORLD VIEW: THE APOSTLE PAUL

RATIONALE FOR TOPIC:

The Apostle Paul is the first writer to formulate Christian theology. His writings have been the basis of many Christian reform movements.

DESCRIPTION OF LEARNING ACTIVITY:

Students meet in the large group for an introductory lecture. They next meet in small groups to discuss Paul's "Epistle to the Romans" as an example of a theological world view. These activities help students develop competencies #1, 2, 3, 5, 8, 15, 17, and 18. Time: 1 hour 15 minutes.

READING ASSIGNMENT:

"The Apostle Paul" from Clyde L. Manschreck, A History of Christianity in the World, Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1974, pp. 15-18.

This is an excellent introduction to Paul and the main theme of his writing.

"The Epistle of Paul to the Romans" from The New American Bible. Chicago: The Catholic Press, 1970, pp. 128-138.

This translation is selected for its clear modern prose.

MAIN IDEAS STRESSED:

From the introductory lecture:

1. Jesus was a historical figure (4 BC - 27 AD) who was later believed to have been the incarnation of God because of the resurrection.
2. The resurrection was interpreted as the removal of original sin, redemption. The cross became the symbol of the possibility for human rebirth after death.
3. Paul pursues three themes: redemption, justification and reconciliation. He asks: How can man be redeemed? Who will be redeemed? Who won't? What should an individual do to be redeemed?
4. "Job" was concerned with how man lives in this world. Paul is concerned with how man should live to prepare for the next world.

From the readings:

1. Men must achieve salvation through faith in Christ.

> All men have sinned and are deprived of the glory of God. (21)

* * * * * * * *

> Through his blood, God made him the means of expiation for all who believe. (21)

For we hold that a man is justified by faith apart from observance of the law. (22)

...all depends on faith, everything is grace. (22)

2. Redemption and original sin.

At the appointed time, when we were still powerless, Christ died for us godless men. It is rare that anyone should lay down his life for a just man, though it is barely possible that for a good man someone may have the courage to die. It is precisely in this that God proves his love for us: that while we were still sinners, Christ died for us. Now that we have been justified by his blood, it is all the more certain that we shall be saved by him from God's wrath. (23)

Therefore, just as through one man sin entered the world and with sin death, death thus coming to all men inasmuch as all sinned-- before the law there was sin in the world, even though sin is not imputed when there is no law-- I say, from Adam to Moses death reigned, even over those who had not sinned by breaking a precept as did Adam, that type of the man to come. (23)

* * * * * * * *

To sum up, then: just as a single offense brought condemnation to all men, a single righteous act brought all men acquittal and life. Just as through one man's disobedience all became sinners, so through one man's obedience all shall become just. (23)

3. Justification and the Christian life.

Just as Christ was raised from the dead by the glory of the Father, we too might live a new life. (24)

* * * * * * * *

Do not, therefore, let sin rule your mortal body and make you obey its lusts; no more shall you offer the members of your body to sin as weapons for evil. Rather, offer yourselves to God as men who have come back from the dead to life, and your bodies to God as weapons for justice. Sin will no longer have power over you; you are now under grace, not under the law. (24)

* * * * * * * *

The wages of sin is death, but the gift of God is eternal life in Christ Jesus our Lord. (24)

4. The body vs. the spirit.

> The law was powerless because of its weakening by the flesh. Then God sent his son in the likeness of sinful flesh as a sin offering, thereby condemning sin in the flesh, so that the just demands of the law might be fulfilled in us who live, not according to the flesh, but according to the spirit. Those who live according to the flesh are intent on the things of the flesh, those who live according to the spirit, on those of the spirit. (25)

5. The duties of Christians:

- offer their bodies as a living sacrifice
- not to conform to their times
- not to think too highly of themselves
- be one body in Christ
- use their God-given talents
- love one another
- be fervent in spirit
- be generous with their hospitality
- not to seek revenge
- be kind to their enemies
- obey authority

etc.

From the discussion:

1. The form of the writing is a letter.

2. The impact of Paul's ideas today, particularly in the South and in conservative religious traditions.

3. The many famous quotes from Paul:

"For all have sinned..."
"The wages of sin..."

REACTION/SUGGESTIONS:

Topic went well. No changes are suggested.

THEOLOGICAL WORLD VIEW: SAINT AUGUSTINE

RATIONALE FOR TOPIC:

Augustine's City of God demonstrates a world view based entirely on Christian theology. His personal conversion to Christianity is symbolic of the conversion of the West to Christianity from classicism. He lays the theological foundation for the Christian church until the time of Aquinas.

DESCRIPTION OF LEARNING ACTIVITY:

Students meet in small groups to discuss Augustine's life and the main ideas in the reading assignment. This activity helps students develop competencies #1, 2, 3, 5, 8, 15, 17 & 18.
Time: 1 hour 30 minutes

READING ASSIGNMENT:

"Religion and Western Culture" from Religion: A Preface, Englewood Cliffs, N.J.: Prentice Hall, 1982, pp 134-141. (a handout)

This article compares the Medieval Christian outlook to the classical outlook and outlines the main developments in Christianity from the formulation of the Nicene Creed to Thomas Aquinas.

A short biography of Augustine from Michael H. Hart, The 100, A Ranking of the Most Influential Persons in History, New York: A & W Visual Library, Hart Publishing Company Inc., 1978, pp. 278-282.

Excerpts from One the Two Cities, Reflections from the City of God, ed. F.W. Strothmann, New York: Frederick Ungar Publishers, Co., 1966, pp. 54-63.

In these excerpts, Augustine explains the significance of original sin. That sin is an act of will, arising out of the mind and not the body, that man is dependent on the grace of an omnipotent God, and that the difference between the earthly city and the heavenly city is the difference between love of self and love of God.

MAIN IDEAS STRESSED:

A. From the readings:

1. The significant events in Augustine's life:

   a. his classical education
   b. his wild boyhood as revealed in his Confessions
   c. the influence of his mother Monica
   d. his conversion in Milan under Ambrose
   e. his founding of the monastery which later became the Augustinian order
   f. his election as Bishop of Hippo
   g. his attempt to combat the Pelagian heresy
   h. his role as a father of the early Christian church in the transition from the classical to the medieval world.

2. The City of God was written to answer the theological questions of his day and to further explain the dogma laid down by Paul who is extensively quoted in this work.

3. The division of the world into two cities, the city of man -- the earthly city -- and the city of God -- the heavenly city -- happened as a result of the original sin which exiled humanity from Paradise. This announces Augustine's main themes - sin and grace.

> God was pleased to derive all men from one individual and created man with such a nature that the members of this race would not have died, had not the first two, of whom the one was created out of nothing, and the other out of him, merited death by their disobedience; for by them so great a sin was committed that by it the human nature was altered for the worse and was transmitted also to their posterity liable to sin and subject to death. And the kingdom of death so reigned over men that the deserved penalty of sin would have hurled all headlong even unto the second death, of which there is no end, had not the undeserved grace of God saved some from this destiny. (41)

4. While some may believe that to live in the earthly city means to live by the flesh and for the flesh, this is not what the phrase, "to live in the flesh," means. The body is not the source of sin (evil); rather it is the soul.

> But if anyone says that the flesh is the cause of all vices and ill conduct inasmuch as the soul lives wickedly only because it is moved by the flesh, it is certain he has not carefully considered the whole nature of man. We believe quite otherwise. For the corruption of the body, which weighs down the soul, is not the cause but the punishment of the first sin; and it was not the corruptible flesh that made soul sinful but the sinful soul that made the flesh corruptible. (42)

5. Augustine further states:

> ...for in its own nature and order the flesh is good. (43)
>
> What is important, however, is the character of the human will. (43)
>
> The right will... is well-directed love, and the wrong will is ill-directed love. (43)

6. Citizens of the city of God experience emotions and Augustine claims that these are good because "the Lord Himself ... exercised these emotions where He judged they should be exercised." (44)

7. Augustine re-iterates the belief in God's omniscience.

> But because God foresaw all things and was therefore not ignorant that man also would fall, we ought to consider this holy city in connection with what God foresaw and ordained, and not according to our own ideas, which do not embrace God's ordination. (44)
>
> * * * * * * * * *
>
> ...He foresaw that by man's seed, aided by divine grace, this same devil himself should be conquered, to the greater glory of the saints. (47)
>
> * * * * * * * * *
>
> ...For who will dare to believe or say that it was not God's power to prevent both angels and men from sinning? But God preferred to leave this in their power and thus to show both what evil could be wrought by their pride, and what good by His grace. (47)

8. Augustine explains the nature of human will, the necessity for humility and man's dependence on God, his creator. In doing this he outlines basic Christian attitudes that persist to today.

> ...The first evil will, which preceded all man's evil acts, was a kind of falling away from the work of God to its own words rather than any positive work.
>
> This falling away is spontaneous; for if the will had remained steadfast in the love of that higher and changeless good which had enlightened the will to understand and to love the good, it would not have turned away to find satisfaction in itself, and so become blind and cold, the woman would not have believed the serpent spoke the truth, nor would the man have preferred the request of this wife to the command of God. The wicked deed, then--that is to say, the transgression of eating the forbidden fruit---was committed by persons who were already wicked...therefore humility, by making up subject to God, exalts us. But pride, being a defect of nature, by the very act of refusing subjection and revolting from Him who is supreme, falls to a low condition. And therefore humility is specially recommended to the city of God as it sojourns in this world and is specially exhibited in the city of God and in the person of Christ its King; while the contrary vice of pride, according to the testimony of the sacred writings, specially rules his adversary the devil. (45)

> Man had been so constituted that, if he looked to God for help, man's goodness should defeat the angel's wickedness; but if by proud self-pleasing he abandoned God, his Creator and Sustainer, he should be conquered.
>
> For as it is not in our power to live in this world without sustaining ourselves by food, while it is in our power to refuse this nourishment and cease to live, as those do who kill themselves, so it was not in man's power, even in Paradise, to live as he ought without God's help; but it was in his power to live wickedly, though thus he should cut short his happiness and incur very just punishment. (46-47)

9. Therefore, Augustine concludes that:

> Accordingly, two cities have been formed by two loves: the earthly by the love of self, even to the contempt of God; the heavenly by the love of God, even to the comtempt of self. (47)

REACTION/SUGGESTIONS:

These excerpts work much better than others that have been tried. Students find them clear and can easily spot the main ideas; therefore, no changes are planned.

THEOLOGICAL WORLD VIEW: EARLY CHRISTIAN/MEDIEVAL ART

RATIONALE FOR TOPIC:

The evolution of Christian art from the early days of Christianity to the Romanesque era illustrates the changes which took place in Christianity as it moved from an illegal, underground cult to the dominant social and cultural force in Europe.

DESCRIPTION OF LEARNING ACTIVITY:

Students meet in the large group for a slide lecture and discussion. This activity helps them develop competencies #1, 2, 3, 5, 7, 8, 9, 15, 17 and 18.
Time: 1 hour 15 minutes.

READING ASSIGNMENT:

"Early Christian Art" and "The Church and Medieval Art" from *An Introduction to Music and Art in the Western World* by Milo Wold and Edmund Cykler, Dubuque, Iowa: Wm. C. Brown Company Publishers, 1972, pp. 66-70, 73-78.

Thomas H. Green, *A Brief History of Western Man*, Second Edition, New York: Harcourt Brace Jovanovich, Inc., 1972, pp. 143-156.

SLIDES SHOWN:

1. Floor plan of the Catacomb of St. Domatilla
2. Interior of Catacomb of St. Domatilla
3. "Christ and the Apostles," fresco, Catacomb of St. Domatilla
4. Basilica of St. Domatilla, Catacomb of St. Domatilla
5. Sketch of Old St. Peter's Basilica, Rome
6. Exterior, St. Paul's Outside the Walls, Rome
7. Nave of Ste. Maria Maggiore, Rome
8. Nave of St. Apollinare Nuovo, Ravenna
9. "Procession of the Martyrs," St. Apollinare Nuovo, Ravenna
10. "Procession of the Virgin Martyrs," St. Apollinare Nuovo, Ravenna
11. Apse of Cefalu Cathedral, Sicily
12. Exterior of the Orthodox Baptistery, Ravenna
13. Interior of above
14. Dome of above
15. Anonymous painting, "Medieval Clerics"
16. Medieval reliquary
17. West facade, Ste. Madeleine, Vezelay, France
18. Arch of Constantine, Rome
19. Tympanum of Narthex, Ste. Madeleine, Vezelay
20. Detail of above
21. Nave of Ste. Madeleine, Vezelay
22. Detail of column of Ste. Madeleine, Vezelay, "Profane Music and the Demon of Licentiousness"
23. "Crucifixion," stained glass, Chartres' Cathedral
24. Exterior, Mont St. Michel monastery
25. Cloister of a Dominican monastery
26. *Book of Kells*, "Matthew 2"
27. *Book of Kells*, "Madonna and Child"
28. *Book of Kells*, "Christ Enthroned"
29. "Last Judgement," west facade, Cathedral of Notre Dame, Paris
30. Detail of west facade, Cathedral of Bourges
31. "Gargoyles," Notre Dame, Paris

MAIN IDEAS STRESSED:

1. For 300 years Christianity was not recognized as a legal Roman religion, therefore the earliest Christian art is "underground art," the art of the catacombs, a system of passageways and caves on the outskirts of the city of Rome.

    1. Sketch of the Catacomb of Domatilla
    2. Interior passageway, above
    3. Fresco of Christ and the Apostles, above
    4. Basilica of Domatilla, above

    These works also show the Roman (classical) influence on early Christian art.

2. While the Christian basilica was only a modification of the Roman basilica, each part was symbolically associated with a Christian doctrine.

    5. Sketch of Old St. Peter's Basilica, Rome
    6. Exterior of the Basilica of St. Paul Outside the Walls, Rome
    7. Nave of the Basilica of Ste. Maria Maggiore, Rome
    8. Nave of St. Apollinare Nuovo, Ravenna

    These slides show the symbolic nature of the cross reflected in the cruciform plan.

    9. Detail of above, "Procession of the Martyrs"
    10. Detail of above, "Procession of the Virgin Martyrs"
    11. Apse of Cefalu, Sicily

    Slides 9 and 10 show the importance of the Eucharist. Slide 11 demonstrates the Byzantine influence and the idea of an omnipotent God.

3. The ritual of Eucharist was celebrated in the basilica and added significance to the symbolism of its architecture. The other important ritual, baptism, which was a more intimate service, was usually held in a separate building, a baptistry. The shape of this building was also a modification of a Roman plan. It was a modification of a part of the Roman bath, the calidarium.

    12. Exterior of the Orthodox Baptistry, Ravenna
    13. Interior of above
    14. Interior of above, the dome

4. The Christian Church was the institution which filled the void left after the fall of Rome in 410 AD. It became the center of the social and political, as well as the religious, life of the Middle Ages (the Medieval period). The Church was therefore better able to direct all aspects of man's life toward salvation. During this time the Church was virtually the sole patron of the arts. It was the ruler of all aspects of life.

    15. "Medieval Clerics"
    16. Medieval reliquary

Nowhere was this power more fully felt than in the act of pilgrimages - the pilgrimage churches. One of the best examples of this is Ste. Madeleine, Vezelay which contained relics associated with Mary Magdalen and the Virgin Mary. Its architectural conventions and pictoral decorations were meant to instruct the illiterate in the purpose of human suffering, the nature of temptation and the path to salvation.

17. West facade, Ste. Madeleine, Vezelay
18. Arch of Constantine
19. Tympanum of narthex, Ste. Madeleine
20. Detail of above
21. Nave of above
22. Detail of column, above, "Profane Music and the Demon of Licentiousness"
23. Crucifixion, stained glass

5. In addition to the Church, the monastery developed as an influential force during this time. It was both a retreat from the world and a place where literacy was kept alive during the Medieval period.

24. Mont St. Michel, XIth century, France
25. Cloister of a monastery
26. Book of Kells, "Matthew 2"
27. Book of Kells, "Madonna & Child"
28. Book of Kells, "Christ"

6. The purpose of the Church was to keep the faithful turned toward the hope of salvation by reminding them to maintain an unquestioning faith in salvation by grace and by reminding them of the tortures awaiting the unfaithful in Hell.

29. "Last Judgement," central portal of the west facade of Notre Dame de Paris
30. Detail of the central portal, west facade, Cathedral of Bourges
31. Detail of gargoyles, Notre Dame de Paris

REACTION/SUGGESTIONS:

The slide lecture is very successful. No changes are planned.

IDS 1102
Unit I
Handout

MEDIEVAL ART

During the slide lecture, the examples of Medieval art listed below will be tied in to the ideas in the article, "Early Christian Art."

For 300 years Christianity was not recognized as a legal Roman religion, therefore the earliest Christian art is "underground art," the art of the catacombs, a system of passageways and caves on the outskirts of the city of Rome.

1. Sketch of the Catacomb of Domatilla
2. Interior passageway, above
3. Fresco of Christ and the Apostles, above
4. Basilica of Domatilla, above

The Christian basilica was a modification of the Roman basilica.

5. Sketch of Old St. Peter's Basilica, Rome
6. Exterior of the Basilica of St. Paul Outside the Walls, Rome
7. Nave of the Basilica of St. Mary Maggiore, Rome
8. Nave of St. Apollinare Nuovo, Ravenna
9. Detail of above, "Procession of the Martyrs"
10. Detail of above, "Procession of the Virgin Martyrs"
11. Apse of Cefalu, Sicily

The ritual of Eucharist was celebrated in the basilica and added significance to the symbolism of its architecture. The other important ritual, baptism, which was a more intimate service, was usually held in a separate building, a baptistry. The shape of this building was also a modification of a Roman plan. It was a modification of a part of the Roman bath, the calidarium.

12. Exterior of the Orthodox Baptistry, Ravenna
13. Interior of above
14. Interior of above, the dome

The Christian church was the institution which filled the void left after the fall of Rome in 410 AD. It became the center of the social and political, as well as the religious, life of the Middle Ages (the Medieval period). The Church was therefore better able to direct all aspects of man's life toward salvation.

15. Medieval clerics (painting)
16. Medieval reliquary
17. West facade, Ste. Madeleine, Vezelay
18. Arch of Constantine
19. Tympanum of narthex, Ste. Madeleine
20. Detail of above
21. Nave of above
22. Detail of column, above, "Profane Music and the Demon of Licentiousness"
23. Crucifixion, stained glass

In addition to the Church, the monastery developed as an influential force during this time.

24. Mont St. Michel, XIth century, France
25. Cloister of a monastery
26. Book of Kells, "Matthew 2"
27. Book of Kells, "Madonna & Child"
28. Book of Kells, "Christ"

The purpose of the Church was to keep the faithful turned toward the hope of salvation.

29. "Last Judgement," central portal of the west facade of Notre Dame de Paris
30. Detail of the central portal, west facade, Cathedral of Bourges
31. Detail of gargoyles, Notre Dame de Paris

THEOLOGICAL WORLD VIEW: MEDIEVAL MUSIC, THE GREGORIAN CHANT

RATIONALE FOR TOPIC:

A wonderful accompaniment to Medieval art is Medieval music. Both underscore the importance of religion in the life of Medieval man.

DESCRIPTION OF LEARNING ACTIVITY:

Students meet in the large group to listen to a Gregorian chant. Students are given a translation of the chant, Te Deum Laudamus. The lights are dimmed and students listen to the chant while viewing slides of Medieval cathedrals. This activity helps students develop competencies #3, 5, 7, 9, 15, 17 and 18. Time: 30 minutes.

WORKS PLAYED:

Te Deum Laudamus (Sung in Latin) from Music for a Medieval Day, produced by Decca Records for Horizon American Publishing Co., 1968.
Te Deum Laudamus (Sung in English) from Music for a Medieval Day, produced by Decca Records for Horizon American Publishing Co., 1968.

MAIN IDEAS STRESSED:

Music also served a religious function during the Medieval period. It was a sort of communication between man and God. As with painting and architecture, the Church exercised rigid control over the types and character of music, keeping it simple, unpretentious, and vocal. The liturgical service determined the formal structure as well as the subject matter and the very text itself. (55)

REACTION/SUGGESTIONS:

Students enjoy the combination of media. However, they appreciate having a copy of the Latin text to accompany the translation.

UNIT II: THEOLOGICAL HUMANISM

DESCRIPTION OF THE UNIT:

In this unit, three introductory lectures are given to develop the gradual shift in thinking from the strict theological world view of Augustine to the theological humanism of the Renaissance. The first lecture focuses on new ideas introduced by Peter Abelard. This lecture leads to the second and a discussion which introduces the comprehensive theology of Thomas Aquinas. His emphasis on human reason opened the door for the spirit of free inquiry which characterized the Renaissance. His emphasis on Aristotle opened the way for a new look at Antiquity. The third lecture summarizes the contribution of Abelard and Aquinas and links these to the economic and social changes which took place at the end of the medieval period and which gave birth to the Renaissance.

A slide lecture contrasts the works of Masaccio, Ghiberti and Brunelleschi with examples of Medieval art to demonstrate the spirit of the new era. This slide lecture also shows the relationship between the economic and social changes (outlined in the previous lecture) and Renaissance art. From here, students read an excerpt from Pico's "Oration on the Dignity of Man" which is also used to exemplify theological humanism.

Botticelli and Michelangelo are paired together to show the impact of Renaissance thinkers like Pico. Slides of "The Allegory of Spring" and "The Sistine Ceiling" are directly related to Pico's hierarchy of knowledge. A film, "Michelangelo: The Last Giant," gives a comprehensive view of Michelangelo's life and work. A lecture on Nicolas Copernicus and a discussion of excerpts from "De Revolutionibus" present Copernicus as a Renaissance humanist and initiator of the scientific revolution. A film by Jacob Bronowski on Leonardo da Vinci, "Tell Me If Anything Ever Was Done," introduces students to da Vinci's life and work. The unit is concluded by a faculty panel discussion with response to questions from the students about the Renaissance and the material studied.

TIME: approximately 20 hours.

OBJECTIVES:

1. To define theological humanism and show its development in Italian Renaissance painting, sculpture, architecture, philosophy, poetry and science;
2. To show the development of theological humanism out of the thinking of the late Middle Ages, particularly the philosophy of Peter Abelard and Thomas Aquinas;
3. To show that the Renaissance is the beginning of many ideas which are an important part of our contemporary way of thinking, i.e. the importance, dignity and worth of the individual, the spirit of free inquiry, the nature of valid scholarship, etc.;

4. To show the beginning of the scientific revolution in the Renaissance, especially in the work of Copernicus and Leonardo da Vinci;
5. To contrast the theological humanism of the Renaissance with the theological world view of Augustine;
6. To continue developing the students ability to write essays;
7. To lay the foundation for the rejection of theological humanism by the Protestant Reformation and the re-emphasis on Aquinas by the Counter-Reformation;
8. To examine the change from a feudalistic to a capitalistic economy, a change which produced the Renaissance;
9. To teach students how to view painting and sculpture as sources of historical knowledge;
10. To show the origins of the secular humanism of the 20th century which will be studied in Semesters III and IV.

CONTENT:

Peter Abelard
Abelard and Heloise
Summa Contra Gentiles by Thomas Aquinas
The Renaissance - An Overview
Renaissance Painting and Sculpture
"Mathematics and Painting in the Renaissance"
Giovanni Pico Della Mirandola
"Oration on the Dignity of Man"
Michelangelo: The Last Giant (film)
Sonnets by Michelangelo
Nicolaus Copernicus
De Revolutionibus Orbium Caelestium
Leonardo da Vinci
Tell Me If Anything Was Ever Done (film)

COMPETENCIES DEVELOPED:

#1, 2, 3, 4, 5, 6, 7, 8, 9, 13, 14, 15, 17 and 18

TESTING/EVALUATION:

The content of this unit, the length of the unit, and its place in the semester plan influenced our selection of two different kinds of testing activities: a comprehensive essay test and a short-answer, objective test.

The comprehensive essay test is divided into two activities. The first is framing a complex thesis statement tracing the shift from a theological world view to a theological humanism. This is done at home to promote thoroughness and to emphasize careful thinking and writing. This thesis statement is submitted for grading, is graded and is returned for revision. This activity re-inforce the idea of writing, editing, revising and re-writing (using the instructor as critical reader) as part of the essay process. Re-written thesis statements then become the framework for the second activity, an in-class essay in which the students use Pico's "Oration," Copernicus' work and an example of Renaissance art as the supporting evidence for their thesis statement.

Unit II
Course Outline
Handout (Typical format)

UNIT II: THEOLOGICAL HUMANISM

Purpose of the unit:

This unit begins with the shift away from the strict theological cosmology of Augustine. The emancipation of reason begins with Peter Abelard and then continues with Thomas Aquinas. This emancipation of reason coupled with the economic change from feudalism to capitalism stimulated a new world view, theological humanism, the main thrust of the Renaissance (c. 1300-1500). Theological humanism is man's attempt to understand himself, his world and his place in the universal scheme of things through the arts and sciences and through the synthesis of faith and reason.

The objectives of this unit are:

1. To define theological humanism and show its development in Italian Renaissance painting, sculpture, architecture, philosophy, poetry and science.
2. To show the development of theological humanism out of the thinking of the late Middle Ages, particularly the philosophy of Peter Abelard and Thomas Aquinas.
3. To show that the Renaissance is the beginning of many ideas which are an important part of our contemporary way of thinking, for example: the importance, dignity and worth of the individual, the spirit of free inquiry, the nature of valid scholarship, etc.
4. To show the beginning of the scientific revolution in the Renaissance, especially in the work of Copernicus and Leonardo da Vinci.
5. To contrast the theological humanism of the Renaissance with the theological world view of Augustine.
6. To lay the foundation for the rejection of the theological humanism by the Protestant Reformation and the re-emphasis on Aquinas by the Counter-Reformation.

Testing in Unit II:

The content of this unit, the length of the unit and its place in the semester plan is an influence on the selection of two different kinds of testing activities: a comprehensive essay test in two parts and a short-answer, objective test.

The first part of the comprehensive essay test will be to frame an introduction tracing the shift from a theological world view to theological humanism. You will have to discuss the ideas of Peter Abelard and Thomas Aquinas, as well as expand and explain their definition of theological humanism. This introduction will be written at home and is due on the date listed below. (No late papers will be accepted!) Your introduction will be graded by your Beta leader and then returned to you for rewriting. After you have rewritten it, it will be regraded as half of the second part of the comprehensive essay test. (Both grades for the introduction will be recorded.) This should encourage you to re-write and re-edit your papers in order to help yourself and improve your grade.

The second part of the comprehenvise essay test will ask you to use Pico's "Oration on the Dignity of Man", the work of Copernicus and an example of Renaissance art to illustrate ideas in your introduction. This will be an in-class test on the date listed below. More complete directions for each part will be handed out to you later.

The short-answer, objective test will be an in-class test on the date listed below. It will cover material from Unit II. This test will reward those who read their assignments carefully, listen carefully and take accurate notes.

NOTE:

Most of this unit will be spent in Alpha (large group meetings in 5-111) therefore new Beta groups will be assigned at the beginning of Unit III.

WEDNESDAY, JANUARY 19

**** Assignment for today: Read pp. 59-64 & pp. 69-75 Key Terms; Study Questions. ****

9:00 - 10:35 Alpha Lecture: Abelard
10:35 - 10:45 Break
10:45 - 11:50 Alpha Lecture: Feudalism to Capitalism

MONDAY, JANUARY 24

**** Assignment for today: Read pp. 65-68. Key Terms; Study Questions ****

9:00 - 10:45 Beta Test on Unit I
10:45 - 11:00 Break
11:00 - 11:50 Alpha Lecture: Aquinas

WEDNESDAY, JANUARY 26

**** Assignment for today: Read pp. 76-84. Key Terms; Study Questions ****

9:00 - 11:50 (includes break) Alpha Slide Lecture/Discussion: Renaissance Painting, Sculpture and Architecture

MONDAY, JANUARY 31

**** Assignment for today: Read pp. 85-95. Key Terms; Study Questions ****

9:00 - 10:30 Beta Discuss Pico
10:30 - 10:40 Break
10:40 - 11:50 Alpha Slide Lecture: Botticelli and Neoplatonism

WEDNESDAY, FEBRUARY 2

**** Assignment for today: Read pp. 97-109. Key Terms; Study Questions ****

9:00 - 9:30 Alpha Quiz on Renaissance Art (No Make-ups)
9:30 - 10:30 Alpha Slide Lecture: Neoplatonism and the Sistine Ceiling
10:30 - 10:40 Break
10:40 - 11:50 Alpha Film: Michelangelo, The Last Giant

MONDAY, FEBRUARY 7

**** Assignment: Read pp. 111-134 & 135-140. Key Terms; Study Questions ****

9:00 - 10:30 Alpha Lecture: Copernicus
10:30 - 10:40 Break
10:40 - 11:50 Alpha Film: "Tell Me If Anything Was Ever Done"

WEDNESDAY, FEBRUARY 9

**** Assignment for Today: STUDY FOR TEST! READ: pp. 141-144. ****

9:00 - 10:30 Beta Test on Unit III
10:30 - 10:45 Break
10:45 - 11:50 Alpha Lecture: The Reformation

STUDY GUIDE FOR PART I OF ESSAY TEST ON UNIT II

There will be two types of testing in Unit II: a comprehensive essay test and a short-answer, objective test. The comprehensive essay test has been divided into two parts. Part I is writing an introduction for your essay. Part II will be developing examples and writing a conclusion for your essay. Part I will be done at the beginning of Unit II and Part II will be done at the end of the unit. The short-answer, objective test will be in the middle. The directions which follow are for Part I of the essay test.

Part I: The Introduction Due: Thursday, Jan. 28*

Explain clearly the steps which led from the theological cosmology of Augustine to the theological humanism of the Renaissance. Then give a thorough explanation of what is meant by theological humanism.

Your introduction should reflect your knowledge of the lectures and reading assignments in Unit II which address this topic. The reading assignments from which you should draw pertinent information for this introduction are:

Peter Abelard (Handout)
Thomas Aquinas (Handout)
Thomas Aquinas, Summa Contra Gentiles, (Handout)
The Renaissance -- An Overview (Text)
Mathematics and Painting in the Renaissance (Handout)

This introduction will be graded, the grade recorded and the paper returned to you on Thursday, Feb. 4. At that time you will be asked to correct your mistakes, revise, rewrite and resubmit your paper on Feb. 11. (Of course, excellent papers will need little of this.) On Feb. 11 you will add Part II to your Part I in an in-class exam which will be very similar to your Unit I test. Part I, your introduction, will then be regraded as part of your larger essay containing examples of theological humanism and your conclusion.

At the end of Unit II, you will have three grades. One for each of the following:

Part I, The Introduction
The Short-answer, Objective Test
Part II, The completed Essay on Unit II
(Introduction, Examples and Conclusion)

*Grades on late papers will be reduced by one letter grade for each day late.

Test Direction and Study Guide for Part II of Essay Test on Unit II

Part I of this test was writing the introduction for this essay. You should have written your introduction, turned it in and had it returned to you. Now that you know your grade, you will want to re-write your introduction. (There are always the privileged few who do a good job the first time!) As you re-write, remember the purpose of your introduction. The purpose of your introduction is to: (1) explain the shift toward reason which took place at the beginning of the Renaissance; (2) explain why the shift took place; and (3) define the new world view which emerged during the Renaissance, Theological Humanism. Remember that your introduction should enumerate and explain the ideas which you will want to use in Part II.

General Directions: Part II

In Part II you will add body paragraphs and a short conclusion to your essay. In your body paragraphs you will discuss three examples of theological humanism. These are:

- Pico's "Oration on the Dignity of Man"
- The Copernican Revolution
- An example of painting, sculpture or architecture which you have chosen from Unit II

These examples may be discussed in any order you choose. In your conclusion, you will briefly summarize the main points of your paper, Parts I and II.

Specific Directions: Part II

1. When you discuss Pico and Copernicus you should:

    - Begin by presenting an introduction and overview of the main ideas in their work
    - Follow by elaborating and discussing these main ideas. Do this by introducing specific passages from their work which demonstrate these main ideas (above)
    - Each passage should be preceded by a description of the context of the statement and followed by your interpretation of the passage and a discussion of how this passage relates to the main ideas you are developing
    - After introducing and explaining the main ideas and passages, you should explain how these ideas and passages reflect your definition of theological humanism

    (You may want to re-arrange the above in another order. Feel free to create any clear, logical patterns!)

2. When you discuss your art example you should:

- Introduce the title, artist's name
- Give a brief description of the theme of the work
- Select several specific aspects of the work. Introduce each and discuss how it reflects the main theme
- Explain clearly how the theme and aspects discussed above reflect theological humanism

Arrive promptly at 9:25 on Thursday, Feb. 11 for the exam. Bring with you a pen, some blank paper, your introduction, these instructions and your quotations sheet (attached). When you have finished the test, staple your test together in this order:

1. Quotation sheet
2. Introduction
3. Part II
4. Instruction sheet

NAME ______________________________

BETA GROUP ______________________________

ASSIGNMENT # ______________________________

DATE ______________________________

QUOTATION SHEET

You may use this during the test if only the following is written on it.

Passages from Pico's "Oration on the Dignity of Man":

Passages from the Copernican Revolution:

Title of art example:

Artist's name:

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Unit II
Objective Test

Name____________________________________

Assignment # __________________________

Date ____________________________________

Beta Leader______________________________

****

READ THE DIRECTIONS CAREFULLY!

****

Part 1: Identifying Artists; 2 points each

Directions: Identify the creator of each work listed below. Write the correct name in the space to the left of the number. For example:

___________________________ a. "The Last Supper"

___________________________ b. "The Pieta'"

_________________________________ 1. "La Primavera"

_________________________________ 2. "Mona Lisa"

_________________________________ 3. "The Tribute Money"

_________________________________ 4. "Dome of the Cathedral of Florence"

_________________________________ 5. "The Gates of Paradise"

_________________________________ 6. "Holy Trinity"

_________________________________ 7. "The Drunkenness of Noah"

_________________________________ 8. "Portrait of Genevra de Benci"

_________________________________ 9. "Madonna of the Rocks"

_________________________________ 10. "Creation of Adam"

_________________________________ 11. "The Pazzi Chapel"

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Part II: Identifying Significance: 3 points each

Directions: Select four works from the list in Part I. In the spaces below, list the title of each work selected. Then write a clear, concise statement describing the significance of each work to our study of the Renaissance.

1. Title: "____"

Significance____

____

____

2. Title: "____"

Significance____

____

____

____

3. Title: "____"

Significance____

____

____

____

4. Title: "____"

Significance____

____

____

____

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Part III: True or False; 3 points each

Directions: Read each statement carefully.
If the statement is true, circle "T" and go on to the next one.
If the statement is false, circle "F", underline the word (or words) which make the statement false and write the correction for the error on the line below the statement. For example:

T F a. Leonardo da Vinci was the illegitimate son of Lorenzo de Medici.

____

____

T F 1. Peter Abelard like St. Paul believed that reason was inadequate to assist man in understanding anything.

____

____

T F 2. Peter Abelard wrote Sic et Non.

____

____

T F 3. Thomas Aquinas was not a curious man. He placed his faith in reason.

____

____

T F 4. Thomas Aquinas saw curiosity as a disease to avoid if possible.

____

____

T F 5. For Thomas Aquinas, the material world was part of a hierarchical order.

____

____

T F 6. The ability to amass great wealth based on personal ability and shrewd business deals is a significant feature of an economy based on bartering.

____

____

T F 7. During the Renaissance, there was a great revival of Pauline and Augustinian theology.

T F 8. The newly emerging "middle class" became increasingly more powerful, economically and politically, during the Renaissance.

T F 9. One of the most influential middle class families during the Renaissance was the Medici family who ruled the northern Italian city of Milan.

T F 10. According to Jacob Bronowski, Leonardo da Vinci spent the best years of his life working for the Medici in Milan.

T F 11. During the Renaissance, painters rejected the conceptual scheme of representation popular in the Middle Ages and adopted the optical scheme which had been popular in Greek and Roman painting.

T F 12. Leonardo da Vinci's "Study in Proportion" reflected the Renaissance idea that the essence of reality could be best expressed through mathematics.

T F 13. According to Bronowski, the most significant discovery that Leonardo da Vinci made was that the structure of anything in nature determined not only its appearance but also the way it functioned.

T F 14. Pico della Mirandola wrote Summa Theologicae and Summa Contra Gentiles.

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Objective Test

T F 15. Pico saw man's greatest gift from God to be man's free will.

T F 16. Only man, Pico reasoned, was capable of appreciating God's vast achievement.

T. F 17. Pico's philosophy had little impact on the mainstream of the Renaissance.

T F 18. Pico's philosophy separated reality into three levels: the material, the rational and the divine.

T F 19. Like most Renaissance artists, Michelangelo did not become famous until after his death.

T F 20. Michelangelo's most important works, "The Sistine Chapel Ceiling" and the "Dome for St. Peter's Basilica", were paid for by his patrons, the Medici family.

T F 21. Michelangelo's "Last Judgement" reflected the influence of theological humanism in its harmonious balance and classical subject.

T F 22. During the Renaissance, the idea of developing individual talents was influenced by the philosophies of Antiquity.

THEOLOGICAL HUMANISM
PETER ABELARD

RATIONAL FOR TOPIC:

The life of Peter Abelard demonstrates the role the church played in people's lives during the Medieval period. Yet his work represents the shift away from strict Augustinian theology and the beginning of the emancipation of reason.

DESCRIPTION OF THE LEARNING ACTIVITY:

Students meet in the large group for a lecture/discussion of Abelard's life and work. This activity helps students develop competencies #1, 2, 3, 5, 6, 13, 15, 16, 17 & 18.
Time: 1 hour

READING ASSIGNMENT:

"Peter Abelard" from W. T. Jones, The Medieval Mind, A History of Western Philosophy, Second Edition, New York: Harcourt, Brace and World, Inc., 1969, pp. 190-196.

This is a general overview of Abelard contribution to philosophy, the debate over the relation of genera to species.

"Abelard and Heloise" from Harry E. Wedeck, Putnam's Dark and Middle Ages Reader, New York: Capricorn Books, 1965, pp. 274-282.

An exchange of letters between Abelard and Heloise after his castration and her retirement to a nunnery shows how both tried to overcome their tragedy by turning to God.

"The Flowering of Medieval Culture" from Thomas H. Green, A Brief History of Western Man, Second Edition, New York: Harcourt Brace Jovanovich, Inc., 1972, pp. 143-156.

MAIN IDEAS STRESSED:

1. The growth of political, economic and social stability which encouraged the development of medieval universities is briefly discussed. Abelard is linked to this time in which the universities were catalysts in the shift toward reason.

2. Abelard's idea of the two modes of reasoning: reasoning from the particular to the general; and reasoning from the universal to the particular is developed. Students are asked to draw inferences about the nature of the claims that can be made for the conclusions (arrived at through each of the two modes). Then students are asked to work through each mode using the idea of "the Church" as an example. Students draw inferences about their conclusions of their example.

3. Abelard's work, Sic et Non, is discussed. Students are asked why the church would feel threatened by work of this nature. Students see how Abelard applied reason to the product of faith and theology to demonstrate that theology was inconsistent. This questioned the claims made by the church for its theology and for faith.

4. The story of Abelard and Heloise is outlined. Students are asked to draw inferences from the story and from the letters they have read. They are asked to draw inferences about life in medieval times. Students immediately identify with the love story, yet see clearly the differences between then and now.

REACTION/SUGGESTIONS:

This activity is effective. No changes are proposed.

THEOLOGICAL HUMANISM:
THOMAS AQUINAS

RATIONALE FOR TOPIC:

The theology of Aquinas attempts to reconcile the nature of reason and the nature of faith. In doing so, he too, like Abelard, represents the shift toward reason. His writing demonstrates a new emphasis on reason and a reintroduction of classical philosophy with the ideas of Aristotle. (His theology has remained the foundation of Catholicism.)

DESCRIPTION OF THE LEARNING ACTIVITY:

Students meet in the large group for a lecture/discussion. A general introduction to Aquinas' life and thought is followed by a close examination of the reading assignment because Aquinas is very difficult reading for college freshmen. These activities help students develop competencies #1, 2, 3, 5, 6, 13, 15, 16, 17 & 18.
Time: 1 hour

READING ASSIGNMENT:

Excerpt from Summa Contra Gentiles by Thomas Aquinas taken from Karl F. Thompson, ed., Classics of Western Thought, New York: Harcourt, Brace & World, Inc., 1964, pp. 57-64.

In this excerpt, Aquinas draws on Aristotle's ideas (enteleche and Prime Mover Unmoved) to show how God is the final cause and purpose of all things.

MAIN IDEAS STRESSED:

About Aquinas' life and work:

1. A summary of the significance of Abelard emphasizes questioning Church authority and the use of reason.

2. It is emphasized that Thomas Aquinas created a framework for a consistent theology by articulating a complete cosmological structure drawn from Aristotle. The three levels of knowledge in the Thomistic hierarchy (practical, speculative and divine) are defined and discussed.

3. Aristotle's ideas on the way the universe works, the Doctrine of the Four Causes, are discussed. Clarifying examples of intrinsic and extrinsic causes are given. Aristotle's term for the ultimate purpose of things, enteleche, and his term for God, "the Prime Mover Unmoved," is introduced and defined.

4. It is emphasized that the significance of Aquinas' hierarchy was that it legitimized reason and opened up many new areas of learning. Students are asked to compare Aquinas' view of reason with Augustine's.

From the Summa Contra Gentiles:

1. God, "prior to all things in existing being," Aristotle's Prime Mover Unmoved, is the ultimate end and purpose of all things, their enteleche. (66)

2. The purpose of the human intellect is to understand God. ("...the end for the human intellect will be God himself...") This understanding is not rational but the understanding of the limits of reason (Job's understanding"). "Therefore the human intellect reaches God as its end, through an act of understanding." (66)

3. God is understanding ("...for God understands all things in the act of understanding himself"). Therefore, man becomes like God through understanding. (67)

4. The hierarchy of knowledge: "...the practical arts are ordered to the speculative ones"; the speculative ones are ordered to philosophy "this is perceptive and architectonic in relation to others"; and "this first philosophy is wholly ordered to knowing God, as its ultimate end; that is why it is called the divine science. So divine knowledge is the ultimate end of every act of human knowledge and every operation." (67)

5. Man has a natural desire to know. "There is naturally present in all men the desire to know the causes of whatever things are observed." Reason is a gift of God, therefore good and to be used. (68)

REACTION/SUGGESTIONS:

Although content and organization was good, not enough time was scheduled for this activity. An additional 15 minutes is needed.

THEOLOGICAL HUMANISM:
THE RENAISSANCE--AN OVERVIEW

RATIONALE FOR TOPIC:

A summary of important factors leading to a Renaissance is covered in this topic. It shows students why the Renaissance happened and sets forth many of its central themes. This is necessary for students to understand the Renaissance and to appreciate its significance.

DESCRIPTION OF THE LEARNING ACTIVITY:

Students meet in the large group for a lecture/discussion which has three objectives: (1) to review the emancipation of reason by summarizing the changes from Augustine to Aquinas; (2) to discuss the economic and social changes which gave birth to the Renaissance; and (3) to set forth the main themes of the Renaissance. This activity helps students develop competencies #1, 2, 3, 5, 6, 15, 17 & 18.
Time: 1 hour 15 minutes

READING ASSIGNMENT:

"The Renaissance--An Overview"

This is a general introduction to the economic, social and intellectual factors which brought about the Renaissance.

MAIN IDEAS STRESSED:

1. The shift away from a strict theological world view to theological humanism is a result of the emancipation of reason by Abelard and Aquinas.

2. In Augustine's view, reason is opposed to faith.
    a. reason is powerless; leads to sin of pride; is enslaved to evil
    b. faith only road to freedom; only path to knowledge; only way to God.
    c. "there is another form of temptation, even more fraught with danger. This is the disease of curiosity . . . . It is this which drives us on to try to discover the secrets of nature, those secrets which are beyond our understanding, which can avail us nothing and which men should not wish to learn . . . . In this immense forest full of pitfalls and perils, I have drawn myself back, and pulled myself away from these thorns. In the midst of all these things which float unceasingly around me in everyday life, I am never surprised at any of them, and never captivated by my genuine desire to study them . . . . I no longer dream of the stars." St. Augustine

3. Peter Abelard
    a. uses reason to examine the contradictions within theology

   - b. demonstrates that theology (product of faith) is inconsistent
   - c. demonstrates need for a consistent theology
   - d. recognizes two forms of reasoning
   - e. challenges the authority of Church

4. Thomas Aquinas
   - a. sees in Aristotle the potential synthesis of reason and faith
   - b. divides knowledge into 3-part heirarchy:
     - 1b. practical knowledge
     - 2b. speculative knowledge
     - 3b. divine knowledge
   - c. makes room for reason (1b & 2b) which is now seen as a gift from God; can produce limited knowledge of "this world"
   - d. retains idea that faith is only key to "other world"; God remains ultimate source of divine knowledge.
   - e. defines love as motivating force of universe (from Aristotle)
   - f. There is naturally present in all men the desire to know the causes of whatever things are observed. Hence, because of wondering about things that were seen but whose causes were hidden, men first began to think philosophically; when they found the cause, they were satisfied. But the search did not stop until it reached the first cause, for "then do we think that we know perfectly, when we know the first cause." Therefore, man naturally desires, as his ultimate end, to know the first cause. But the first cause of all things is God. Therefore, the ultimate end of man is to know God.

     St. Thomas Aquinas
     Summa Contra Gentiles

5. The effects of this shift: a new cosmology
   - Shift from "other-worldly" to "this-worldly" view of life.
   - Shift to use of reason to investigate this world-development of arts and sciences.
   - Shift to Greek and Roman ideas--especially humanism.

6. What were the reasons for this shift?
   - move from feudalism to capitalism
   - rise of cities
   - creation of middle class
   - rise of universities
   - re-introduction of humanism

7. What is theological humanism?

   Man's attempt to understand himself, his world and his place in the universal scheme of things through the arts and sciences and through the synthesis of faith and reason.

8. What are the implications of this definition?
   - man can reason (understand)
   - the self (individual) is important
   - his world (here-and-now) is as important as the next
   - there is a universal scheme of things (God still exists as creator and man as creation)
   - arts and sciences become important
   - an attempt is made to synthesize faith and reason

9. In the attempted synthesis of faith and reason the Thomistic hierarchy is used. Platonic scholars also see that this is similar to Plato's theory of knowledge, therefore it becomes the basis of Neoplatonism in the Renaissance.

The Spiritual World	Metaphysical (Forms)	divine knowledge accessible through faith and inspiration.
The Intellectual World	rational (principles)	speculative knowledge accessible through abstract reasoning; known also by studying the arts and sciences.
The Physical World	material sensual (senses)	practical knowledge accessible through "common sense," common experience. Knowledge of everyday life.

10. An example of love on these three levels would be:
    eros - material, sensual, physical
    philos - rational, intellectual
    agape - spiritual, divine

11. As a result of this new cosmology, there was new interest in:
    ancient ruins
    ancient languages
    classical education
    beauty in simplicity

REACTIONS/SUGGESTIONS:

Very successful because it helps students organize their knowledge about Abelard and Aquinas and establishes a firm foundation for a long unit.

THEOLOGICAL HUMANISM:
MATHEMATICS AND PAINTING IN THE RENAISSANCE

RATIONALE FOR TOPIC:

Students are easily able to comprehend the shift from the Medieval, theological world view to the Theological Humanism of the Renaissance when they compare Medieval painting, sculpture and architecture to the work of Masaccio, Ghiberti and Brunelleschi.

DESCRIPTION OF THE LEARNING ACTIVITY:

Students meet in the large group for a slide lecture. This activity helps students develop competencies #1, 3, 5, 8, 9, 15, 17 & 18. Time: 1 hour and 20 minutes.

READING ASSIGNMENT:

Excerpt from Chapter 10 of Mathematics--A Cultural Approach by Morris Klein, Reading, Massachusetts: Addison Wesley Publishing Company, Inc., 1962, pp. 203-231.

This excerpt stresses the difference in the Medieval artist's perception of the world and the Renaissance artist's perception of it. It explains this difference in terms of: organizational scheme (conceptual vs. optical); subject matter and theme; and symbolism. It also includes relevant biographical information on Ghiberti, Brunelleschi, Alberti, da Vinci and Botticelli (as well as others).

SLIDES SHOWN:

1. "Medieval Crucifixion" (stained glass)
2. "Holy Trinity" by Masaccio c. 1425
3. Detail of above
4. Perspective drawing of above
5. Outdoor perspective of above
6. "Christ in Majesty" (Medieval)
7. "The Tribute Money" by Masaccio c. 1427
8. Detail of above
9. Detail of above
10. Detail of above
11. Renaissance drawing of perspective
12. Competition panels, "The Sacrifice of Isaac," by Ghiberti and Brunelleschi
13. East Doors of Baptistery of the Cathedral of Florence, "The Gates of Paradise," by Ghiberti (c. 1425-1452)
14. Detail of above, "Flora and Fauna"
15. Detail of above, "Portrait of Ghiberti"
16. Detail of above, "Jacob and Esau"
17. Detail of above, "Jacob and Esau"
18. Detail of above
19. Ruins of Forum, Rome
20. Cathedral of Florence, "Il Duomo," at night
21. Detail of above, Brunelleschi's Dome (c. 1420-1436)
22. Detail of above, Brunelleschi's Dome
23. Dome of the Pantheon, Rome

24. Exterior of Pazzi Chapel by Brunelleschi (c. 1429-1442)
25. Floor Plan of above
26. Interior of above
27. Interior of above
28. Interior of Early Christian Church
29. Interior of Medieval Church

MAIN IDEAS STRESSED:

1. Students are asked to look for examples of the following Renaissance themes in the slides:
   - A. The shift toward a "this-wordly" view of life.
   - B. The use of reason to investigate this world: observation, mathematics, arts and sciences.
   - C. The emphasis on Greek and Roman ideas.
   - D. The synthesis of faith and reason.

2. A medieval crucifixion demonstrated the conceptual organizational scheme (Klein).

3. "The Holy Trinity" by Masaccio presents the optical organizational scheme. This demonstrates, as do the life-like portraits within the picture, a shift toward "this-worldliness." (A&B above). Roman influence (C above) is found in the triumphal arch and coffered barrel vault. All elements converge to portray a synthesis of faith and reason (D above). Also important because its portraits demonstrate the rise of the middle class and the emphasis on individualism. The friendship between Masaccio and Brunelleschi is discussed.

4. "Christ in Majesty"--Medieval--used as contrast to "The Holy Trinity"

5. "The Tribute Money," Masaccio
   Emphasized are:
   -- portrayal of Christ in human situation (A)
   -- landscape, shadows, modelling of figures, portraits (B)
   -- Roman official (C)
   -- combined elements of painting (D)
   Also discuss:
   -- fresco technique
   -- Masaccio's early death

6. Competition panels for North door of the Florentine Baptistery, "The Sacrifice of Isaac," by Ghiberti and Brunelleschi.
   Emphasized are:
   -- the story of the competition
   -- the personalities of the artists
   -- the rising wealth of Florence

7. "The East Doors of the Florentine Baptistery, The Gates of Paradise," Ghiberti
   Emphasized are:
   -- the 3-part plan of doors, external frame (flora and fauna), internal frame (prophets and liberal arts) panels (scenes from Old Testament) as symbolic of Thomistic hierarchy of knowledge (D)

-- flora and fauna (A & B)
-- prophets and liberal arts (A & B)
-- panels (organization + perspective) (A, B, C)
Also discuss:
-- portrait of Ghiberti (individualism)
-- awarding of contract for doors (growth of capitalism)
-- recognition of artistic "genius"

8. Dome of the Florence Cathedral by Brunelleschi
   Emphasized are:
   -- the story of the building of the dome (individualism)
   -- Brunelleschi's trip to Rome to see Pantheon (B, C)
   -- symbolism of dome

9. The Pazzi Chapel, Brunelleschi
   Emphasized are:
   -- the symbolism of the mathematics and geometry used (B)
   -- architectural elements (C)
   -- "removal" of altar (A)
   -- man in the center, under the dome (D)
10. A medieval cathedral is shown. It's size, shape and effect are contrasted to Brunelleschi's "Pazzi Chapel."

REACTION/SUGGESTIONS:

This activity is very effective. Students like the examples, ideas and stories.

IDS 1102
Unit II
Handout

SLIDE LIST: RENAISSANCE PAINTING, SCULPTURE & ARCHITECTURE

1. "Medieval Crucifixion"
2. "Holy Trinity" by Masaccio c. 1425
3. Detail of above
4. Perspective drawing of above
5. Outdoor perspective of above
6. "Christ in Majesty" (Medieval)
7. "The Tribute Money" by Masaccio c. 1427
8. Detail of above
9. Detail of above
10. Detail of above
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25. Floor Plan of above
26. Interior of above
27. Interior of above
28. Interior of Early Christian Church
29. Interior of Medieval Church

THEOLOGICAL HUMANISM:
BOTTICELLI

RATIONALE FOR TOPIC:

Botticelli's art firmly establishes the connection between Renaissance art and Renaissance philosophy. Botticelli's "Allegory of Spring" (La Primavera) was conceived as a tribute to the theological humanism of the Platonic Academy headed by Pico. This painting reflects in detail the ideas discussed in the "Oration on the Dignity of Man."

DESCRIPTION OF LEARNING ACTIVITY:

Students meet in the large group for a slide lecture on Botticelli's "Allegory of Spring." Slides of the painting, including details of each principal figure, are shown and discussed. This activity helps students meet competencies #3, 5, 7, 8, 9, 15 & 18.
Time: 30 minutes

MAIN IDEAS STRESSED:

1. Students are given the title and are asked to spend a few minutes looking carefully at the painting. Then they are asked to explain why the painting is an "allegory" of Spring. Details to be discussed are:
   - flowers and details of nature
   - "nude" figures
   - classical influences
   - similarities between the representation of Venus here and earlier representations of Virgin Mary
   - Mercury parting branches
   - women dancing
   - sexuality of Zephyr clutching Chloris

2. The story is told of Zephyr, Chloris and Flora being drawn from Ovid. Students begin to see the painting as an allegory of love. After hearing the story they see the painting as symbolic of the transition from physical to spiritual love and the role education plays in this (through "Venus humanitas" within the painting as well as through the viewer's knowledge of the classical subject). The levels of love indicated in the painting lead smoothly into a discussion of the philosophical meaning of the painting.

3. The painting is viewed as a symbol of the new Renaisance philosophy of man. Students are asked to re-read the passage from Pico's "Oration" and relate it to the painting.

> "Summoned in such consoling tones and invited with such kindness, like earthly Mercuries, we shall fly on winged feet to embrace that most blessed mother and there enjoy the peace we have longed for: That most holy peace, that indivisible union, that seamless friendship through which all souls will not only be at one in that mind which is above every

> mind, but, in a matter which passes expression, will really be one, in the most profound depths of being. This is the friendship which the Pythagoreans say is the purpose of all philosophy. This is the peace which God established in the high places of heaven and which the angels, descending to earth, announced to men of good will, so that men, ascending through this peace to heaven, might become angels. This is the peace which we would wish for our friends, for our age, for every house into which we enter and for our own soul, that through this peace it may become the dwelling of God, so that, too, when the soul, by means of moral philosophy and dialectic shall have purged herself of her uncleanness, adorned herself with the many disciples of philosophy as with the raiment of a prince's court and crowned the pediments of her doors with the garlands of theology, the King of Glory may descend and, coming with the Father, take up his abode with her. If she proves worthy of so great a guest, she will, through his boundless clemency, arrayed in the golden vesture of the many sciences as in a nuptial gown, receive him, not as a guest merely, but as a spouse. And rather than be parted from him she will prefer to leave her own people and her father's house. Forgetful of her very self she will desire to die to herself in order to live in her spouse, in whose eyes the death of his saints is infinitely precious: I mean that death--if the very plentitude of his life can be called death--whose meditation wise men have always held to be the special study of philosophy. . . ."

REACTION/SUGGESTIONS:

Forty-five minutes to one hour would be a realistic time to schedule for this activity. Students enjoy the topic and many of them select this as their art example on the test.

THEOLOGICAL HUMANISM:
GIOVANNI PICO DELLA MIRANDOLA

RATIONALE FOR TOPIC:

Pico's "Oration on the Dignity of Man" sets forth the philosophical outlook of the Renaissance, Theological Humanism. It provides a literary expression of the main themes that are explored in the work of Masaccio, Ghiberti and Brunelleschi. The influence of Pico's ideas are traced in the work of Botticelli, da Vinci, Michelangelo and Copernicus.

DESCRIPTION OF LEARNING ACTIVITY:

Students meet in the large group for a lecture/discussion of Pico's "Oration." This lecture discussion includes: (1) important biographical information about Pico; (2) the relationship between Pico's essay and the spirit of the age; and (3) examination of key passages in the "Oration." This activity helps students develop competencies #1, 2, 3, 4, 5, 6, 8, 13, 15, 16 & 18.
Time: 1 hour 20 minutes.

READING ASSIGNMENT:

"The Oration on the Dignity of Man" by Giovanni Pico della Mirandola, trans., A Robert Caponigri, Chicago: A Gateway Edition, 1956, pp. 3-22.

MAIN IDEAS STRESSED:

1. Biography of Pico
   Elements emphasized:
   - his age
   - nobility
   - education
   - "The Oration" as a preface to Pico's 900 theses
   - his encounter with Savonarola

2. Pico represents the spirit of the times because he:
   - is infatuated with ideas of Antiquity. (comparison to Pericles' "Memorial Oration")
   - carefully examines texts: establishes valid scholarship:*
     a. quotes many classic and Christian authors. (Similar to Augustine and Aquinas; however they quoted the Bible)
     b. quotes many non-Christian authors.
   - is a free-thinker.*
   - believes in the dignity of man.*
   - believes in the knowledge of this world.
   - is individualistic.*
   - delights in this world.*
   - has great imagination and vision.*
   - believes in the harmony and unity of the universe.*
   - believes reason is the gift of God; that through reason man draws nearer to God.
   - believes in man's free will.*

*modern ideas stemming from Renaissance

3. Key passages examined:
   a. . . . there was nothing to be seen more marvelous than man (87)
   b. And still, as I reflected upon the basis assigned for these estimations, I was not fully persuaded by the diverse reasons advanced by a variety of persons for the pre-eminence of human nature. . . (87)
   c. These reasons are all, without question, of great weight; nevertheless, they do not touch the principal reasons, those, that is to say, which justify man's unique right to such unbounded admiration. (88)
   d. At long last, however, I feel that I have come to some understanding of why man is the most fortunate of living things and, consequently, deserving of all admiration; of what may be the condition in the hierarchy of beings assigned to him, which draws upon him the envy, not of the brutes alone, but of the astral beings and of the very intelligences which dwell beyond the confines of the world. (88)
   e. . . . there remained no archetype according to which we might fashion a new offspring, nor in his treasure houses the wherewithal to endow a new son with a fitting inheritance, nor any place, among the seats of the universe, where this new creature might dispose himself to contemplate the world. (88-89)
   f. At last, the Supreme Maker decreed that this creature, to whom He could give nothing wholly his own, should have a share in the particular endowment of every other creature. (89)
   g. 'We have given you, Oh Adam, no visage proper to yourself, nor any endowment properly your own, in order that whatever place, whatever form, whatever gifts you may, with premeditation, select, these same you may have and possess through your own judgment and decision. The nature of all other creatures is defined and restricted within laws which We have laid down; you, by contrast, impeded by no such restrictions, may, by your own free will, to whose custody We have assigned you, trace for yourself the lineaments of your own nature. I have placed you at the very center of the world, so that from that vantage point you may with greater ease glance round about you on all that the world contains. We have made you a creature neither of heaven nor of earth, neither mortal nor immortal, in order that you may, as the free and proud shaper of your being, fashion yourself in the form you may prefer. It will be in your power to descend to the lower brutish forms of life; you will be able through your own decision, to rise again to the superior orders whose life is divine.' (89)

h. But upon man, at the moment of his creation, God bestowed seeds pregnant with all possibilities, the germs of every form of life. Whichever of these a man shall cultivate, the same will mature and bear fruit in him. If vegative, he will become a plant; if sensual, he will become brutish; if rational, he will reveal himself a heavenly being; if intellectual, he will be an angel and the son of God. And if, dissatisfied with the lot of all creatures, he would recollect himself into the center of his own unity, he will there, become one spirit with god, in the solitary darkness of the Father, Who is set above all things, himself transcending all creatures. (90)

i. But what is the purpose of all this? That we may understand--since we have been born into this condition of being what we choose to be--that we ought to be sure above all else that it may never be said against us that, born to a high position, we failed to appreciate it, but fell instead to the estate of brutes and uncomprehending beasts of burden. (92)

REACTION/SUGGESTIONS:

This activity can be improved by doing #1 and #2 above in one class meeting and then following with #3. Then students will have a framework for analyzing and identifying the important ideas in the work. This activity, can also be improved by having #3 in small group discussions.

THEOLOGICAL HUMANISM:
MICHELANGELO

RATIONALE FOR TOPIC:

No reason needs to be given for studying the world's most famous artist.

DESCRIPTION OF LEARNING ACTIVITY:

Students meet in the large group for a slide lecture on the Sistine Chapel Ceiling and for a film on Michelangelo, "The Last Giant." These activities help students develop competencies #1, 2, 3, 4, 5, 7, 8, 9 & 18.
Time: 1 hour 50 minutes

READING ASSIGNMENT

"Michelangelo: The Last Giant," produced by NBC News, distributed by McGraw-Hill, release date, 1967.

This is a summary of the text of the film.

Plan of the Sistine Chapel Ceiling.

Selected Sonnets by Michelangelo from Michelangelo Buonarroti, Complete Poems of Michelangelo, Joseph Trifani, trans., Atlantic Highlands, N.J.: Humanities Press, 1969, selections.
"The Garland and the Girdle"
"The Silkworm"
"To Pope Julius II"
"On Rome in the Pontificate of Julius II"
("While Painting the Sistine Chapel Ceiling")
"A Prayer For Aid"
"The Artist and His Work"
"Heaven-Born Beauty"
"A Wasted Brand" *
"Waiting For Death"
"On the Brink of Death" *
"The Speech of Night" *
(* featured in the film)

MAIN IDEAS STRESSED:

1. An overall view of the Sistine Ceiling is shown and students are asked to examine their plan of the ceiling. The 3 zones of the ceiling are pointed out and the symbolic significance of the content of each area is discussed. These are:

   Darkest zone: spandrels containing the "ancestors of Christ" representing the lowest level of human existence--human reproduction--the physical world. Yet each group is a "family"--highest form of unenlightened love. A representative spandrel "Josias" was examined in detail.

   Lighter zone: portraits of the prophets and sibyls representing human life illumined by inspiration (those who divined the birth of Christ). Details are shown of Zachariah and Jonah. The significance of their placement is discussed--Zachariah over entrance (prophesied the Entry Into Jerusalem) and Jonah over altar (divine intervention/salvation. A detail of "The Delphic Sibyl" is discussed.

Corner spandrels: great deeds of men and women through faith and purity (Entrance: David and Judith) and with god's intervention (Altar: Moses and Haman). This represents the power of human will, courage and faith. Details examined are: "David and Goliath", "Judith and Holofernes", "The Brazen Serpent".

Lightest zone: central panels containing stories from "Genesis." Each panel is examined as representing both the highest level of human aspiration--direct contact with God--and the journey of the soul back to God--the scheme of placement entrance to altar.

2. Students are asked to see the zones of the ceiling as symbolic of the levels in Renaissance philosophy, especially Pico's.

Darkest zone --- physical existence
Lighter zone --- rational and intellectual awakening
Lightest zone --- soul's journey back to God

3. The symbolism of the lightest zone is examined in detail.

"Drunkenness of Noah" --- man's perversion through excesses of body.

"The Flood" --- man's damnation as a result of excess.

"The Sacrifice of Noah" --- man's attempt to communicate with God; his acknowledgement of a higher existence.

"The Temptation and Expulsion" --- the reason for man's separation from God; the consequence of temptation in ignorance.

"The Creation of Eve" --- cause of man's downfall, the creation of woman (symbolic of physical desire).

"The Creation of Adam" --- God's direct hand in man's nature. Adam has a pure soul, symbolic of man conquering his physical drives.

"The Congregation of the Waters" --- God's plan for the universe. Rising to the knowledge of forms.

"The Creation of the Sun, Moon and the Planets" --- Rising to the knowledge of the heavenly spheres.

"Separation of the Light and Dark" --- Return to the One-Pure Being.

REACTION/SUGGESTIONS:

Both students and faculty feel the film is very effective. However, at least 15 additional minutes are needed to cover this topic well. Students have suggested that we allot time to discuss the Sonnets in small group discussions.

THEOLOGICAL HUMANISM:
COPERNICUS

RATIONALE FOR TOPIC:

Nicolas Copernicus is a key figure in the development of science and a good example of Renaissance humanism. His proposal of a Heliocentric theory, which he rediscovered in ancient Greek sources, signaled the re-evaluation of Medieval scientific knowledge. His insistence on clarity and logical reasoning ties him to the emancipation of reason begun by Abelard and Aquinas. His heavy reliance on Platonic assumption reflects the growing influence of thinkers like Pico. Copernicus rounds out this unit and helps re-unite science with the other arts.

DESCRIPTION OF LEARNING ACTIVITY:

Students meet in the large group for a lecture/discussion/demonstration of Copernicus work. The material is presented in four parts:

(1) a demonstration of the geocentric theory using models
(2) a discussion of the geocentric theory of Ptolemy and the physics of Aristotle
(3) a discussion of De Revolutionibus
(4) a discussion of the objections to and support for the Copernican system.

This activity helps students develop competencies #1, 2, 3, 4, 5, 6, 7, 8, 9, 13, 15, 16 & 18.
Time: 2½ hours

READING ASSIGNMENT:

"Nicolaus Copernicus" by S. Chandrasekhar from Bullentin of Atomic Scientists, V29, June, 1973, pp. 27-30.

This essay gives relevant biographical information on Copernicus, discusses clearly his main theories and explains his relationship to the Renaissance.

Excerpts from The Copernican Revolution by Thomas S. Kuhn, Cambridge, Massachusetts: Harvard University Press, 1966, pp. 133-182.

These excerpts contain excerpts and analysis of Copernicus' work, De Revolutionibus Orbium Caelestium (On the Revolutions of the Heavenly Bodies).

MAIN IDEAS STRESSED:

1. Demonstration using models
    a. Demonstration of celestial motions (7 wanderers, constellations) using a model of the Ptolemaic system.
        1a. Diurnal Rotation
        2a. Seasonal movement of heavens
        3a. Retrograde motions
        4a. Precession

- b. Demonstration using model of the Copernican system.
  - 1b. Diurnal Rotation
  - 2b. Seasonal movement of heavens
  - 3b. Retrograde
  - 4b. Precession

2. The Geocentric Theory
   - a. Aristotle, theorist
     - 1a. Laws of the Terrestrial World
       - natural motion
       - unnatural (forced) motion
     - 2a. Laws of Celestial World
       - stars as light
       - geocentric
       - perfectly circular orbits
   - b. Ptolemy, mechanics of the geocentric theory

3. Copernicus' discovery was the result of his rigorous use of logical deduction.
   - a. In his preface, Copernicus presents the current ideas on the relationship of reason and faith.

> I know that the speculations of a philosopher are far removed from the judgment of the multitude--for his aim is to seek truth in all things as far as God has permitted human reason so to do--yet I hold that opinions which are quite erroneous should be avoided. (120)

   - b. Copernicus states his position:

> Now authorities agree that Earth holds firm her place at the center of the Universe, and they regard the contrary as unthinkable, nay as absurd. Yet if we examine more closely it will be seen that this question is not so settled, and needs wider consideration. (124)

* * * *

> It is the vault of Heaven that contains all things, and why should not motion be attributed rather to the contained than to the container, to the located than the locater? (124)

* * * *

> For grant that Earth is not at the exact center but at a distance from it. (124)

* * * *

> One may then perhaps adduce a reasonable cause for the irregularity of these variable

> motions. And indeed since the Planets are seen at varying distances from the Earth, the center of Earth is surely not the center of their cycles. (124)

* * * *

> That the Earth, besides rotating, wanders with several motions and is indeed a Planet. (125)
>
> That Earth is not the center of all revolutions is proved by the apparently irregular motions of the planets and the variations in their distances from the Earth. (131)

* * * *

> For if we transfer the motion of the Sun to the Earth, taking the Sun to be at rest, then morning and evening risings and settings of Stars will be unaffected, while the stationary points, retrogressions, and progressions of the Planets are due not to their own motions, but to that of the Earth, which their appearances reflect. (131)

* * * *

> Finally we shall place the Sun himself at the center of the whole Universe, if only we face the facts, as they say, "with both eyes open." (132)

4. Objections and Support
   a. Objections
      1a. Copernicus cast aside the weight of centuries. Questions raised were:
         - How did a heavy object like the earth get in motion?
         - Won't rotation objects fly apart?
         - If the earth rotates West to East, won't an object thrown in the air fall West of it's initial position?
         - If the earth moves around the sun, why isn't air left behind?
         - How can this system account for parallax?
         - Why can't I feel the earth moving?
      2a. Religious objectives:
         - The universe revolves around man, physically and spiritually; the Bible says so.
         - Heaven is up; Hell is down (accounts for volcanoes.)
         - This would end the intimacy between man and God.
         - Makes man too small.

b. Support
  1b. Symmetry, Harmony of Unity
  2b. God's Infinite nature--
  3b. Sun illuminates whole
  4b. Simplicity T Truth

REACTION/SUGGESTIONS:

It was agreed that too much time is taken up with Ptolemy and Aristotle. More emphasis can be placed on these in Semester I freeing students to master Copernicus in this unit.

THEOLOGICAL HUMANISM:
LEONARDO DA VINCI

RATIONALE FOR TOPIC:

Leonardo da Vinci embodies the spirit of the Renaissance--the man who could do anything: paint, sculpt, manufacture war machines, explain the mysteries of nature. His work was presented to the students via Jacob Bronowski's excellent film, "Tell Me If Anything Was Ever Done."

DESCRIPTION OF LEARNING ACTIVITY:

Students meet in the large group to view the film, "Tell Me If Anything Was Ever Done." This activity helps students develop competencies #1, 2, 3, 4, 5, 7, 9 & 18.
Time: 1 hour

READING ASSIGNMENT:

"Leonardo da Vinci" by Juergen Schulz from Atlantic Brief Lives, A Biographical Companion to the Arts edited by Louis Kronenberger, Boston: Little, Brown and Company, 1965, pp. 454-457.

Handout on the film, "Tell Me If Anything Was Ever Done."

REACTION/SUGGESTIONS:

Students are impressed by the film. They are impressed by da Vinci and also by Bronowski.

UNIT III: RELIGIOUS BACKLASH--SCIENTIFIC PROGRESS

DESCRIPTION OF THE UNIT:

From the beginning of the semester, we have been charting the flow of ideas that formed our modern world. We watched a theological cosmology swell and then ebb, overtaken by the emancipation of reason, theological humanism and the Renaissance. From this renaissance streamed many modern ideas: the dignity and worth of the individual; the value and validity of scholarship; the legacy and importance of Greek and Roman ideas; the careful and accurate study of nature; and the belief in man's free will.

In this unit (Unit III), we see two opposing currents develop--one current dedicated to reforming religious doctrines and the other dedicated to the growth of scientific knowledge. "Reforming" religious doctrines means rethinking Renaissance ideas of free will in light of God's omniscience, omnipotence and omnipresence. Martin Luther saw that the practices of the Renaissance Church were incompatible with the theology of Augustine. He called for reforms within the Church and wound up creating a new branch of Christianity, the Protestant branch. Pressure from reformers outside the Church, like Luther, and from those inside the Church, like Ignatius Loyola, created a far-reaching Catholic reform movement, the Counter-Reformation. Both reform movements, Protestant and Catholic, led to inquisitions which championed orthodoxy and persecuted heresy.

At the same time that religious reform movements were reaffirming the religious truths of ages past, astronomers--spurred by the ideas of Copernicus--were searching the heavens for new truths. Johannes Kepler and Galileo Galilei represent the forward march of science. Kepler confirmed the heliocentric theory of Copernicus and Galileo established the beginning of the scientific method. Both discovered new laws. Both were persecuted as heretics, Kepler by the Protestant inquisition and Galileo by the Catholic inquisition.

These two currents flowed side by side but never mixed. They produced two important features of our modern world: conservative religious tradition which resists change and liberal scientific tradition which embraces it. The inter-play of these two and the tensions this inter-play creates are still felt today.

In this unit, an introductory lecture on Martin Luther and the Reformation is followed by small group discussions of "The 95 Theses" and "The Freedom of A Christian." The work of Johannes Kepler is studied and is followed by listening to selections of Handel's "Messiah."

The Counter-Reformation is introduced via the Spanish mystics/reformers and the Catholic Church's emphasis on visual arts is examined through the Basilica of St. Peter's. (The Protestants spurned these and concentrated on music.) Mystic revelation is contrasted with scientific observation by studying the life and work of Galileo.
Time: approximately 16 hours

OBJECTIVES:

1. To show how the religious reform movements were a backlash against Renaissance thinking while the scientific revolution was a furthering of it.
2. To show how the reformers tried to move the Catholic Church back to its earlier theology of Augustine.
3. To show the origins of Protestant Christianity.
4. To show the origins of contemporary Catholic dogma in the Counter-Reformation.
5. To show the beginning of modern astronomy and physics in the work of Kepler and Galileo.
6. To introduce students to the foundations of the scientific method in observation and logical reasoning.
7. To introduce the students to carefully reading difficult primary sources like Luther, Loyola and Galileo.
8. To continue developing the students' ability to write essays.
9. To examine mysticism as a source of knowledge.
10. To introduce students to feature films as a source of historical knowlege.

CONTENT:

The Reformation
Martin Luther
Excerpts from "The 95 Theses"
"The Freedom of a Christian" by Martin Luther
Johannes Kepler
Kepler's Science
"The Harmony of the Spheres" ("Cosmos" episode)
"The Messiah" by Handel
The Counter-Reformation
Excerpts from The Spiritual Exercises of St. Ignatius of Loyola
Excerpts from The Autobiography of St. Teresa of Avila
"The Ecstasy of St. Teresa"
"Grandeur and Obedience," Program 7 of Civilization by Kenneth Clark
Galileo Galilei
"Letter to the Grand Duchess Christina" by Galileo
Galileo's Science
Frames of Reference
Galilean Relativity
"Galileo" by Bertold Brecht (film)

COMPETENCIES DEVELOPED:

#1, 2, 3, 4, 5, 6, 7, 8, 9, 11, 13, 15, 16, 17 & 18.

TESTING/EVALUATION:

REACTIONS/SUGGESTIONS:

IDS 1102
Unit III
Test Directions

TEST DIRECTIONS FOR UNIT III TEST

General Directions:

The Unit III test will cover.

- Martin Luther
- Johannes Kepler
- Galileo Galilei

During the one-hour-and-a-half testing period you will write short essays on two of the three persons listed above. These two will be assigned to you. Everyone will not be writing on the same two persons.

You will give the same information about each person you are assigned. (Directions for this below.) You may use your pink worksheets during the test. No other notes will be allowed. Your worksheets will be stapled to the back of your finished test.

Please bring paper and a pen to the test.

Specific Directions:

1. Use the name of the person you are writing about as the title of each short essay. Write the name neatly at the top of your first page.

   For example: If the first person you are writing about is Martin Luther, "Martin Luther" should appear as the title at the top of the first page of your short essay on Martin Luther.

2. Write several paragraphs explaining the main ideas and/or discoveries of the person you are discussing and support these ideas with two quotations selected from the reading assignment(s).

   These ideas should appear in the summary you wrote on your pink worksheet. On this test you should take each idea and explain it clearly for an ignorant reader. As you are writing your paragraphs of explanation, incorporate the two quotations from your worksheet in your discussion. Give the context and interpretation of each quote as well as an explanation of how it relates to the idea(s) you are discussing.

   These paragraphs should form the introduction and body of a short essay about the person you are discussing.

3. Write a well-developed more if needed in which you explain the significance of the ideas/discoveries written about in the above.

   This paragraph could combine personal insight with ideas from your reading. You will not have any notes for this part of the test. Therefore you should think through what you are going to say before the test.

   This paragraph(s) should be the conclusion of your short essay.

Review "Tips for Writing For An Ignorant Reader" before the test.

GOOD LUCK!

IDS 1102
Worksheet

Name ______________________________

Beta group leader ______________________

Complete the following form as part of preparation for class discussion. Bring the form with you to class. (Attach additional sheets if necessary.)

Title of reading:

Author:

In the space below summarize this article in 25 words or less.

Select two quotations from this article which led you to form the summary statement above. (1) State the context of each quotation selected. Clearly explain the important ideas/information leading up to the quotation. (2) Write in the quotation. Note the page no. for future reference. (3) Consider the quotation and its context, then explain: (a) what you think the writer is saying; and (b) why this is important.

Context

Quotation:

Interpretation:

IDS 1102
Worksheet p. 2

Context:

Quotation:

Interpretation:

Record the page numbers of any statements which confused you in the space below. Underline the statements in the reading.

List below new vocabulary words and their definitions which you learned through this reading.

List below any intriguing ideas or questions raised in your mind by this article.

RELIGIOUS BACKLASH--SCIENTIFIC PROGRESS:
MARTIN LUTHER AND THE REFORMATION

RATIONALE FOR TOPIC:

Studying Martin Luther and the beginning of the Reformation movement helps students understand the origin of Protestantism and the attempt to return to the Augustinian world view (Unit I). In addition, reading Luther helps them improve their ability to read carefully and analytically.

DESCRIPTION OF THE LEARNING ACTIVITY:

Students meet in the large group for a lecture/discussion on "Martin Luther and the Reformation." This lecture stresses:

1. the jelling of economic, political, intellectual, emotional and ecclesiastical forces leading to reform;
2. specific historical events leading to Luther's reform movement; and
3. brief review of Luther's life. (Students are given an outline of this lecture. A copy follows).

Students then meet in small discussion groups to discuss Luther's writings. These activities help students develop competencies #1, 2, 4, 5, 13, 15, 16, 17 & 18.
Time: 2½ hours

READING ASSIGNMENT:

"The Reformation" from The Renaissance and The Reformation edited by Donald Weinstein, New York: The Free Press, 1965, pp. 25-28.

This is an overview of Luther's role in the Reformation and an examination of the principle ideas in his theology.

"Martin Luther" from Michael H. Hart, The 100, A Ranking of the Most Influential Persons in History, New York: A & W Visual Library, Hart Publishing Company Inc., 1978, pp. 148-153.

This is a short biography of Luther which stresses his contribution to the Reformation.

Excerpts from "The 95 Theses" (#1-6, 27, 62, 81, 86, 90, 92-95) from John Dillenberger, ed., Martin Luther, Selections from His Writings, Garden City, New York: Doubleday & Company, Inc., 1961, pp. 490-500.

"The Freedom of A Christian" from The Renaissance and The Reformation edited by Weinstein (above). pp. 173-184.

These two works give students a chance to examine Luther through his own writings. They see his initial position ("95 Theses") and then his system of theology ("Freedom of A Christian").

MAIN IDEAS STRESSED:

From the lecture:

1. The jelling of the forces leading to reform were the result of the great awakening and expansion of consciousness produced by the Renaissance.

a. the economic forces
  1a. growth of capitalism and of middle class
    - creates personal wealth; sense of good life--especially in Germany where many lower class members move into middle class--better jobs, housing
    - leads to resentment of excessive taxation of Church
    - work ethic teaches, "what I earn is mine."
  2a. desire to throw off last vestiges of feudalism
    - resentment of "inherited" authority; nobility and Church
b. the political forces
  1b. rising nationalism
    - recognition of local ties and interests vs. abroad
    - recognition of likenesses based on language creation of "modern" German
    - desire to keep wealth at home for use/good of those who earned it
  2b. growing power of "elected" officials
c. the intellectual forces
  1c. recognition of individual
    - individual source of dignity, rights, power spreading to lower classes
  2c. spread of education and literacy
  3c. invention of printing press printing from movable type c. 1450 Gutenberg
  4c. translation and printing of the Bible
d. the emotional forces
  1d. reading Bible produced a re-examination of faith
  2d. individuals saw the figures in Bible as personally and directly involved with God rather than removed from God by ritual and hierarchy
  3d. contrasts were drawn between lifestyle of Jesus and Apostles and the lifestyle of the Renaissance clergy
e. the ecclesiastical forces--the condition of the Church
  1e. Absolute low point in history of Catholic Church
  2e. corruption is rampant through all levels of clergy. More specifically:
    there is a breakdown of monastic discipline and clerical celibacy, the higher levels of the clergy live in great luxury.

Janssen, Catholic priest and historian says:

> The higher ecclesiastical orders, on the other hand, enjoyed abundant wealth, which many of them had no scruples in parading in such an offensive manner as to provoke the indignation of the people, the jealousy of the upper classes, and the scorn of all serious minds...In many places complaints

> were loud against the mercenary abuse of sacred things...against the large and frequent sums of money sent to Rome, of annates and hush money. A bitter feeling of hatred against the Italians...began gradually to gain ground....(p. 330 Durant, The Story of Civilization: Part VI: The Reformation.)

5e. the Popes themselves confirm this view:

Pope Pius II:

> People say that we live for pleasure, accumulate wealth, bear ourselves arrogantly, ride on fat mules and handsome palfreys...keep hounds for the chase, spend much on actors and parasites and nothing in defense of the faith. And there is some truth in their words; many among the cardinals and other officials of our court do lead this kind of life. If the truth be confessed, the luxury and pomp of our court is too great. And this is why we are so detested by the people that they will not listen to us, even when we say what is just and reasonable. (p. 12-13, Durant, VI.)

6e. the practice of selling indulgences to those who would confess their sins and contribute to a worthy church cause.

2. Specific events leading to Luther's reform:
   a. Tetzel's sale of indulgences for the building of new St. Peter's

Tetzel's plenary indulgence:

> May our Lord Jesus Christ have mercy on thee, and absolve thee by the merits of His most holy Passion. And I, by His authority, that of his blessed Apostles Peter and Paul, and of the most holy Pope, granted and committed to me in these parts, do absolve thee, first from all ecclesiastical censures, in whatever manner they may have been incurred, and then from all thy sins, transgressions, and excesses, how enormous soever they may be, even from such as are reserved for the cognizance of the Holy See; and as far as the keys of the Holy Church extend, I remit to you all punishment which you deserve in purgatory on their account, and I restore you to the holy sacraments of the Church...and to that innocence and purity which you possessed at baptism; so that when you die the gates of punishment shall be shut, and the gates of paradise of delight shall be opened; and if you shall not die at present, this grace shall remain in full

force when you are at the point of death. In the name of the Father, and of the Son, and of the Holy Ghost. (p. 338, Durant, VI)

- b. Luther's objections to indulgences
  - 1b. not acts of faith, acts of barter; thus swindle the simple out of faith
  - 2b. based on translation from Latin, "doing penance" rather than "being penitent" (Luther's translation)
  - 3b. "95 Theses" 1517

    1. When our Lord and Master Jesus Christ said, "Repent" (Matthew 4:17), he willed the entire life of believers to be one of repentance.
    2. This word cannot be understood as referring to the sacrament of penance, that is, confession and satisfaction, as administered by the clergy.
    3. Yet it does not mean solely inner repentance; such inner repentance is worthless unless it produces various outward mortifications of the flesh.
    27. They preach only human doctrines who say that as soon as the money clinks into the money chest, the soul flies out of purgatory.
    94. Christians should be exhorted to be diligent in following Christ, their head, through penalties, death, and hell;
    95. And thus be confident of entering into heaven through many tribulations rather than through the false security of peace (Acts 14:22).

3. Who is this man who sets out alone to challenge the authority of the most powerful force of his age?

4. Brief Biography of Luther
   - a. son of peasants who were able to substantially improve their income during Luther's life
   - b. educated in traditional education, considerable Latin, some Greek and Hebrew
   - c. became an Augustinian monk
     - July 1505--lightning struck
     - May 1507--Final vows
     - The Augustinians were a strict order; unlike others; pious and celibate
   - d. stricken with great despair over his personal sinfulness, Luther felt the need to communicate man's fallen state and God's grace. This was strict Augustinian Doctrine.
   - e. at 38, called before a Church council and backed into a corner over the question of papal authority, Luther asserted that the Bible (The Scripture) was a higher authority than the Pope.
     - fundamental Protestant position
     - "Hier stehe Ich, Ich Kann nicht anders"
   - f. Luther was excommunicated

g. through his pen, Luther became one of the most powerful men of his age--testimony to the printing press and rising literacy
  1g. his translation of the Bible into German went through 377 editions during his lifetime and set the pattern for modern German
  2g. introduced congregational singing. His hymn, "A Mighty Fortress Is Our God" is still regularly sung by many Christian sects.

h. still He is a man of contrasts
  1h. married a former nun
  2h. "Table Talk"

Martin Luther from "Table Talk":

If God can pardon me for having crucified and martyred Him over more than twenty years with the celebration of Mass, He will certainly give me credit for the good drinks I will in His honor every so often...

He who wants to fathom and probe the riddles of God's will and works on the strength of his own reason and without the aid of Holy Writ, thinks he can catch the wind with a spoon or weigh fire on a butcher's scale. God works at times in mysterious ways which our mind cannot grasp: He consigns one to hell and damnation, another He blesses and makes just. It does not behoove us to cross-examine God about the whys and wherefores but we should rather put our trust in Him that He does nothing without good reason. And, indeed, He would be a paltry God if He were to give an account of Himself to every darned fool. Let us be content with the Gospel as He chose to reveal it to us in the Bible.

A young man is like new cider that ferments and bubbles over, wanting out so as to be noticed by all.

A lie is like a snowball; the longer you roll it, the bigger it gets.

From "The Freedom of A Christian":

Man has a twofold nature, a spiritual and a bodily one. According to the spiritual nature, which men refer to as the soul, he is called a spiritual, inner, or new man. According to the bodily nature, which men refer to as flesh, he is called a carnal, outward, or old man. (152)

First, let us consider the inner man to see how a righteous, free, and pious Christian, that is, a spiritual, new, and inner man, becomes what he is.

It is evident that no external thing has any influence in producing Christian righteousness or freedom, or in producing unrighteousness or servitude. (152)

...One thing, and only one thing, is necessary for Christian life, righteousness, and freedom. That one thing is the most holy Word of God, the gospel of Christ, as Christ says, John II:25, "I am the resurrection and the life; he who believes in me, though he die, yet shall he live"; (152)

* * * *

The Word is the gospel of God concerning his Son, who was made flesh, suffered, rose from the dead, and was glorified through the Spirit who sanctifies. To preach Christ means to feed the soul, make it righteous, set it free, and save it, provided it believes the preaching. Faith alone is the saving and efficacious use of the Word of God. (153)

Rom. I:17, "He who through faith is righteous shall live." The Word of God cannot be received and cherished by any works whatever but only by faith. Therefore it is clear that, as the soul needs only the Word of God for its life and righteousness, so it is justified by faith alone and not any words; for if it could be justified by anything else, it would not need the Word, and consequently it would not need faith. (153)

* * * *

Since, therefore, this faith can rule only in the inner man, as Rom. 10 (:10) says, "For man believes with his heart and so is justified," and since faith alone justifies, it is clear that the inner man cannot be justified, freed, or saved by any outer work or action at all, and that these works, whatever their character, having nothing to do with this inner man. On the other hand, only ungodliness and unbelief of heart, and no outer work, make him guilty and a damnable servant of sin. (153)

...Here we must point out that the entire Scripture of God is divided into two parts: commandments and promises. Although the commandments teach things that are good, the things taught are not done as soon as they are taught, for the commandments show us what we ought to do but do not give us the power to do it. They are intended to teach man to know himself, that through them he may recognize his inability to do good and may despair of his own ability. (153)

* * * *

From this you once more see that much is ascribed to faith, namely, that it alone can fulfill the law and justify without works. You see that the First Commandment, which says, "You shall worship one God," is fulfilled by faith alone. (154)

* * * *

Therefore, it is a blind and dangerous doctrine which teaches that the commandments must be fulfilled by works. The commandments must be fulfilled before any works can be done, and the works proceed from the fulfillment of the commandments (Rom. 13:10), as we shall hear. (155)

* * * *

This is not to say that every Christian is placed over all things to have control over them by physical power--a madness with which some churchmen are afflicted--for such power belongs to kings, princes, and other men on earth...The power of which we speak is spiritual. (156)

In this life he must control his own body and have dealings with men. Here the works begin; here a man cannot enjoy leisure; here he must indeed take care to discipline his body by fastings, watchings, labors, and other reasonable discipline and to subject it to the Spirit so that it will obey and conform to the inner man and faith and not revolt against faith and hinder the inner man, as it is the nature of the body to do if it is not held in check. (156)

Our faith in Christ does not free us from works but from false opinions concerning works, that is, from the foolish presumption that justification is acquired by works. Faith redeems, corrects, and preserves our consciences so that we know that righteousness does not consist in works. (156)

REACTIONS/SUGGESTIONS:

Students respond well to this material. No changes are proposed.

IDS 1102
Unit III
Handout (typical sample)

THE REFORMATION AND MARTIN LUTHER

The Reformation is the religious reform movement which established the Protestant branch of the Christian religion. The first of the Protestant sects is the Lutheran, founded by Martin Luther during the sixteenth century. The Reformation is a product of the Renaissance--yet brought an end to the Renaissance.

Today and Tuesday we will examine four topics:

1. The jelling of forces leading to reform
2. Specific events leading to Luther's reform
3. A brief biography of Luther
4. "The Freedom of a Christian"

Outline of today's lecture:

I. Jelling of forces leading to reform
    A. Economic forces
        1. growth of capitalism and the middle class
        2. desire to be free from feudalism
    B. Political forces
        1. rise of nationalism
        2. increased power of elected officials/decline of papal power
    C. Intellectual forces
        1. Spread of individualism
        2. Spread of education and literacy
        3. Rise of Printing Press
        4. Translation of Bible into verbacular
    D. Emotional forces
        1. Re-examination of faith
        2. Contrast between Biblical Jesus and practices of Renaissance Church
    E. Ecclesiastical forces
        1. Breakdown of monastic discipline and clerical celibacy
        2. Wealth of the Church
        3. Corruption in the Church
        4. Sale of indulgences

II. Specific events leading to Luther's reform
    A. Tetzel's sale of indulgences
    B. Luther's objections, "The 95 Theses"

III. Brief biography of Luther (1483-1546)
    A. Son of peasants
    B. Well-educated
    C. Augustinian monk
    D. In despair over his sinful nature
    E. In conflict with the Church over Papal authority
    F. One of the most powerful men of his time
    G. A man of contrasts

RELIGIOUS BACKLASH--SCIENTIFIC PROGRESS:
JOHANNES KEPLER

RATIONALE FOR TOPIC:

Kepler's mother was imprisoned by Lutheran reformers and charged with witchcraft. Kepler had to work many years to effect her release and in the meantime suffered himself because his laws of planetary motion were denounced as contrary to sacred writ. In spite of this, Kepler's discoveries and his attitude toward his work established an early foundation for modern astronomy and for the scientific method. Kepler's life and work demonstrate the force of the opposing currents at work in this age.

DESCRIPTION OF LEARNING ACTIVITY:

Students meet in the large group to view the Cosmos episode, "The Harmony of the Spheres." Then they hear a lecture/discussion of Kepler's three laws of planetary motion. These activities help students develop competencies #1, 2, 3, 4, 5, 6, 8, 9, 10, 11, 13, 15, 16, 17 & 18.
Time: 2½ hours.

READING ASSIGNMENT:

"Johannes Kepler" derived from Arthur Koestler, The Watershed, Garden City, New York: Doubleday and Company, Inc., 1960, pp. 25, 29, 30, 60, 78-80, 91, 92, 111-116, 119-121, 135.

This is a critical biography of Kepler.

"Kepler's Science" from Physics: The Fabric of Reality by S. K. Kim, New York: Macmillan Publishing Co., Inc., 1975, pp. 122, 123.

This is a short article which sets forth Kepler's 3 laws and explains each.

VIDEOTAPE SHOWN:

"The Harmony of the Spheres," a Cosmos episode.

Carl Sagan presents Kepler's discoveries and explains their significance. This is intertwined with a dramatization of Kepler's life which emphasizes his early education, his work with Tycho Brahe and his persecution by the Lutheran reformers.

MAIN IDEAS STRESSED:

1. The discovery of Kepler's first law was based on Brahe's data on Mars.
    a. Brahe failed to interpret the data because he was looking to a geocentric model.
    b. Brahe's observations were extremely accurate and show a new spirit of scientific observation.

2. The first law:

> Planets describe elliptical orbits about the sun, with the sun located at one of the foci of the ellipse.

a. formula for ellipse
b. mystery of second foci
c. rejection of circular orbit

3. The second law:

The radius vector sweeps out equal areas in equal intervals of time.

a. abandoning uniform motion
b. substituting non-uniform motion

4. The third law:

The square of the period of revolution of a planet is proportional to the cube of its semi-major axis.

a. the idea of "magnetic" forces
b. Galileo's jump to acceleration as an explanation of non-uniform motion

c. $d^3 \quad T^2$, beginning of the inverse square law

5. Comparison of Ptolemy, Copernicus and Kepler. (A copy follows)

REACTION/SUGGESTIONS:

Students thoroughly enjoy the "Cosmos" episode. They also feel that the reading, "Kepler's Science," is easy to grasp. Therefore, no changes are proposed.

IDS 1102
UNIT III
Handout

COMPARISON OF EARLY MODELS OF OUR SOLAR SYSTEM

	EXPLANATION OF OBSERVATION		
OBSERVATION "FACT"	PTOLEMY	COPERNICUS	KEPLER
MOTION OF ENTIRE HEAVENS DAILY FROM E TO W	MOTION OF ALL HEAVENLY SPHERES E TO W	REFLECTION OF ROTATION OF EARTH W TO E	SAME
ANNUAL MOTION OF SUN W TO E THROUGH ZODIAC	ROTATION OF SUN'S SPHERE W TO E IN A YEAR	REFLECTION OF ANNUAL REVOLUTION OF EARTH ABOUT SUN	SAME
NONUNIFORM MOTION OF SUN THROUGH ZODIAC	ORBIT OF SUN ECCENTRIC, SPEED UNIFORM	ORBIT OF EARTH ECCENTRIC, SPEED UNIFORM	ORBIT OF PLANET ELLIPTICAL, SPEED NONUNIFORM
RETROGRADE MOTIONS OF THE PLANETS	EPICYCLES AND DEFERENTS	RELATIVE MOTIONS OF PLANETS, INCLUDING EARTH, AROUND SUN	SAME
VARIATIONS IN RETROGRADE MOTIONS	EQUANT, ECCENTRICS	EPICYCLETS	NONUNIFORM ORBITAL MOTION: TILT OF PLANETARY ORBITS WITH RESPECT TO EARTH'S
DISTANCES OF PLANETS	ARBITRARY AS LONG AS ANGULAR RELATIONSHIPS CORRECT	RELATIVE DISTANCES SET BY OBSERVATIONS	FORCE RELATES DISTANCES TO PERIODS
"CAUSE" OF PLANETARY MOTIONS	NATURAL MOTION OF CELESTIAL SPHERES: NO FORCE	SAME, NO FORCE	MAGNETIC FORCE FROM SUN
ACCURACY OF PREDICTIONS	TYPICALLY 5° OR LESS; SOMETIMES 10°	SAME	GENERALLY ABOUT 10'

RELIGIOUS BACKLASH--SCIENTIFIC PROGRESS:
THE COUNTER-REFORMATION

RATIONALE FOR TOPIC:

The Counter-Reformation was the Catholic Church's attempt to reform itself, to formulate and re-affirm an orthodox belief, to supress heresy and to win back souls. In doing this, it turned to a new breed of religious men and women best exemplified by Ignatius Loyola, founder of The Society of Jesus and Teresa of Avila, founder of the Carmelite Order of Nuns. Both Loyola and Teresa relied on a mystical concept of faith achieved by sublimating the will to God. In studying this material, students have the opportunity to see mystical forms of knowledge, to see the Counter-Reformation as a backlash against the liberality of the Renaissance and to see the foundation of modern Catholic dogma.

DESCRIPTION OF LEARNING ACTIVITY:

Students meet in small groups to discuss the reading assignments. This activity helps students master competencies #1, 2, 3, 5, 6, 8, 17 & 18.
Time: 2 hours

READING ASSIGNMENT:

"The Counter-Reformation" from The Renaissance and The Reformation edited by Donald Weinstein, New York: The Free Press, 1965, pp. 32-37.

This is an overview of the main ideas in the Counter-Reformation, including a discussion of the role of the Jesuits. It also discusses the rise of science during this era.

Excerpts from The Spiritual Exercises of St. Ignatius of Loyola from Karl F. Thompson, ed., Classics of Western Thought, New York: Harcourt, Brace and World, Inc., 1964, pp. 338-345.

These excerpts stress the need to adjust individual thinking to that of the Church.

Excerpts from The Autobiography of St. Teresa of Avila from E. Allison Peers, trans., and ed., The Life of Jesus, Garden City, New York: Doubleday & Company, Inc., 1960, pp. 179, 180, 189, 190-192, 197, 198, 199, 261, 274, 275.

These excerpts emphasize St. Teresa's mystical encounters with God.

MAIN IDEAS STRESSED:

From The Spiritual Exercises:

1. The plan and purpose of spiritual exercises.
2. "Some Rules To Be Observed In Order That We May Think With The Orthodox Church"

> The first: removing all judgment of one's own, one must always keep one's mind prepared and ready to obey the true Spouse of Christ, our Holy Mother, which is the Orthodox, Catholic, and Hierarchical Church. (187)

The second: it is proper to commend confession of sins to the priest and the receiving of the Eucharist at least once a year. It is more commendable to receive the same Sacrament every eighth day or at least once in each month. (187)

* * * *

The third: one should commend to Christ's faithful people the frequent and devout hearing of the holy rite or sacrifice of the Mass; also the saying of the Church hymns, the psalms, and long prayers, either within the Churches or outside; also to approve the hours marked out for the Divine Office, for prayers of whatever kind, and for the Canonical Hours. (187)

The fourth: to praise vows . . . of chastity, poverty, and perpetual obedience, and other works of perfection and supererogation. Here it must be noted in passing that . . . a vow relates to those things which lead more closely to the perfection of Christian life. Concerning other things which lead away from perfection, for example . . . matrimony, a vow is never to be made. (187)

* * * *

The eighth: to praise the construction of Churches and their adornment; also images . . . to be venerated . . . for the sake of what they represent. (188)

The ninth: to uphold all the precepts of the Church and not impugn them. (188)

* * * *

The eleventh: to put the highest value on sacred teaching, both the positive and the Scholastic, as they are commonly called. For as it was the object of the ancient holy Doctors, Jerome, Augustine, Gregory, and the like, to stir up men's minds to embrace the love and worship of God, so it is characteristic of Blessed Thomas Bonaventure, the Master of the Sentences, and other more modern Divines, to lay down and define more exactly the things necessary for salvation, and, according to what was fitting for their own times and for posterity, helpful in the confutation of heresies. (188)

* * * *

The thirteenth: finally, so as to be altogether of the same mind and in conformity with the Church herself, if she shall have defined anything to be black which to our eyes appears to be white, we ought in like manner to pronounce it to be black. For we must undoubtingly believe that the Spirit of our Lord Jesus

> Christ, and the Spirit of the Orthodox Church, His Spouse, by which Spirit we are governed and directed to salvation, is the same; and that the God who of old delivered the precepts of the Decalogue is the same who now instructs and governs the Hierarchical Church. (189)
>
> The fourteenth: it must also be borne in mind that although it be most true that no one is saved except he who is predestinated, we must speak with circumspection concerning this matter lest, perchance stretching too far the grace of predestination of God, we should seem to wish to shut out the force of free will and the merits of good works, or on the other hand, attributing to the latter more than belongs to them. (189)

* * * *

> The eighteenth: although it is in the highest degree praiseworthy and useful to serve God from pure love, yet the fear of the Divine Majesty is greatly to be commended. And not that fear only which we call filial, which is the most pious and holy, but also the other which is called servile, as being . . . very often necessary . . . because it helps much towards raising from mortal sin. (189)

From The Autobiography of St. Teresa:

1. St. Teresa experiences God in a mystical rapture.

> In these raptures the soul seems no longer to animate the body, and thus the natural heat of the body is felt to be very sensibly diminished: it gradually becomes colder, though conscious of the greatest sweetness and delight. (192)
>
> . . . though rapture brings us delight, the weakness of our nature at first makes us afraid of it, and we need to be resolute and courageous in soul, much more so than for what has been described. For, happen what may, we must risk everything, and resign ourselves into the hands of God and go willingly wherever we are carried away. . . (192)
>
> These effects are very striking. One of them is the manifestation of the Lord's mighty power: as we are unable to resist His Majesty's will, either in soul or in body, and are not our own masters, we realize that, however irksome. This imprints in us great humility. Indeed, I confess that in me it produced great fear--at first a terrible fear. One sees one's body being lifted up from the ground; and although the spirit draws it after itself, and if no resistance is

> offered does so very gently, one does not lose consciousness--at least, I myself have had sufficient to enable me to realize that I was being lifted up. The majesty of Him Who can do this is manifested in such a way that the hair stands on end, and there is produced a great fear of offending so great a God, but a fear overpowered by the deepest love, newly enkindled, for One Who as we see, has so deep a love for so loathesome a worm that He seems not to be satisfied by literally drawing the soul to Himself, but will also have the body, mortal though it is, and befouled as is its clay by all the offences it has committed. (193)
>
> For, while the rapture lasts, the body often remains as if dead and unable to itself to do anything: it continues all the time as it was then the rapture came upon it--in a sitting position, for example, or with the hands open or shut. The subject rarely loses consciousness: I have sometimes lost it altogether, but only seldom and for but a short time. As a rule the consciousness is disturbed; and, thought incapable of action with respect to outward things, the subject can still hear and understand, but only dimly, as though from a long way off. (194)
>
> And now comes the distress of having to return to this life. Now the soul has grown new wings and has learned to fly. Now the little bird has lost its unformed feathers. Now in Christ's name the standard is raised on high; it would seem that what has happened is nothing less than that the captain of the fortress has mounted, or has been led up, to the highest of its towers, and has reared the standard aloft there in the name of God. From his position of security he looks down on those below. No longer does he fear perils; rather he desires them, for through them, as it were, he receives the assurance of victory. This becomes very evident in the little weight now given by the soul to earthly matters, which it treats as the worthless things that they are. He who is raised on high attains many things. The soul has no desire to seek or possess any free-will, even if it so wished, and it is for this that it prays to the Lord, giving Him the keys of its will. (195)

2. The Ecstasy of St. Teresa
   A few minutes is taken at the beginning of a large group meeting to view Bernini's statue, "The Ecstasy of St. Teresa," to re-read her description of it from her Autobiography and to read her poem about it.

> It pleased the Lord that I should sometimes see the following vision. I would see beside me, on my left hand, an angel in bodily form--a type of vision which I am not in the habit of seeing, except very rarely.

Though I often see representations of angels, my visions of them are of the type which I first mentioned. It pleased the Lord that I should see this angel in the following way. He was not tall, but short, and very beautiful, his face so aflame that he appeared to be one of the highest types of angel who seem to be all afire. They must be those who are called cherubim: they do not tell me their names but I am well aware that there is a great difference between certain angels and others and between these and others still, of a kind that I would not possibly explain. In his hands I saw a long golden spear and at the end of the iron tip I seemed to see a point of fire. With this he seemed to pierce my heart several times so that it penetrated to my entrails. When he drew it out, I thought he was drawing them out with it and he left me completely afire with a great love for God. The pain was so sharp that it made me utter several moans; and so excessive was the sweetness caused me by this intense pain that one can never wish to lose it, nor will one's soul be content with anything less than God. It is not bodily pain, but spiritual, though the body has a share in it--indeed, a great share. So sweet are the colloquies of love which pass between the soul and God that if anyone thinks I am lying I beseech God, in His goodness, to give him the same experience. (196-197)

--The Autobiography

When that sweet huntsman from above
First wounded me and left me prone,
Into the very arms of Love
My stricken soul forthwith was thrown
And all my lot so changed is
That my beloved One is mine,
And I at last am surely His.

The dart wherewith he wounded me
Was all embarbed round with love,
And thus my spirit came to be
One with its maker, God above.
No love but this I need to prove;
My life to God surrendered is
And my beloved one is mine
And I at last am surely His.

--"The Ecstasy"

REACTION/SUGGESTIONS:

RELIGIOUS BASKLASH--SCIENTIFIC PROGRESS: COUNTER-REFORMATION ART

RATIONALE FOR TOPIC:

The Catholic Church turned to the visual arts to create the sensations of mystical ecstasy and Church authority. Program 7 of Kenneth Clark's "Civilization" series, "Grandeur and Obedience," forcibly demonstrates this.

DESCRIPTION FO LEARNING ACTIVITY:

Students meet in the large group to view the film, "Grandeur and Obedience." This activity helps students develop competencies #3, 5, 6, 7, 8, 9 & 18.
Time: 1 hour

READING ASSIGNMENT:

"Grandeur and Obedience" from A Guide to Civilization with an introduction and notes by Richard McLanathan, New York: Time Life Films, 1970, pp. 61-68.

REACTION/SUGGESTIONS:

Students enjoy the program. This activity is effective. No changes are planned.

RELIGIOUS BACKLASH--SCIENTIFIC PROGRESS:
GALILEO GALILEI

RATIONALE FOR TOPIC:

Galileo completes our attempt to show the scientific revolution which was taking place during the religious backlash. Galileo's life and his persecution by the Inquisition position him squarely in the midst of this chaotic era. Galileo's work shows both the origin of modern astronomy and physics and the foundation of the scientific method in observation and logical reasoning. At the same time that we are studying his contribution to modern science, we are preparing the students to study Newton and later Einstein.

DESCRIPTION OF LEARNING ACTIVITY:

The students begin studying Galileo by watching a filmed version of Bertold Brecht's play, "Galileo," in the large group. This introduces them to Galileo, the man, and also demonstrates his major discoveries. Then students meet again in the large group for a lecture/discussion of Galileo's science and in small groups to discuss the readings. These activities help students master competencies #1, 2, 4, 5, 6, 8, 9, 10, 11, 13, 15, 17 & 18.
Time: 6 hours

READING ASSIGNMENT:

"Galileo Galilei" from The 100, A Ranking of the Most Influential Persons In History, by Michael H. Hart, New York: A & W Visual Library, 1978, pp. 99-104.

This is a short biography of Galileo which stress his discoveries and their historical significance.

"Letter to the Grand Duchess Christina" by Galileo Galilei from Stillman Drake, trans., Discoveries and Opinions of Galileo, Garden City, New York: Donbleday and Company, Inc., 1957, pp. 175-187.

In this letter, Galileo defends his scientific work, denotes the difference between science and religion and petitions for patronage.

"Galileo's Science" from Physics, The Fabric of Reality by S. K. Kim, New York: Macmillan Publishing Co., Inc., 1975, pp. 1-8, 119, 120.

These excerpts explain how Galileo overturned Aristotelian science and how he formulated Galilean Relativity and the law of inertia.

MAIN IDEAS STRESSED:

From the lecture/discussion:

1. Galileo's celestial discoveries were made possible by his perfection of the telescope. He discovered:

    a. craters and mountains on the moon; thereby demonstrating that it and other celestial bodies had compositions similar to earth--that they were not made of substances lighter than air. (This idea was originally set forth by Democritus.)

    b. sunspots; thereby proving that the sun was not perfect and inferring that neither were the heavens.

    c. the phases of Venus; thereby proving Copernicus heliocentric theory since the Ptolemaic system could not explain these phases.

    d. 4 of the moons of Jupiter which he saw as a mini-solar system.

2. This amplification of the human eye was picked up by practical men of every nation even though Galileo's Italian colleagues rejected it. (Typical academia!)

3. Galileo's terrestrial discoveries became the foundation of modern physics and established the basis of the scientific method. He established:

    a. the concept of acceleration. This defied Aristotle's idea of motion.

    b. the laws of the inclined plane and related the speed of the object in motion to the angle of change.

    c. the formula for the period of a pendulum.

4. Galileo was perplexed that the laws of the pendulum and the inclined plane were not equivalent since he felt the universe was governed by a single, unifying force. For this reason, he also felt that the celestial and terrestrial laws should be the same.

5. Galileo emphasized the "how" rather than the "why" (Aristotle), and he made most of his discoveries on inferences from observation or from logical deductions. His methods became the methods of modern science.

From "Galileo's Science":

1. Galileo disproves Aristotle's explanation of motion.

> It was Galileo Galilei (1564-1642) who successfully challenged the tradition of Aristotelian physics. The publication of Galileo's Two New Sciences, in 1638, was instrumental in exposing the falsity of Aristotelian claims about the nature of motion.
>
> . . . Galileo thus pointed out that the absolute character of rest and motion--and, more importantly, the earth's state of absolute rest--could not be established by the Aristotelian method. (214)

2. Galileo establishes that the concept of a "frame of reference . . . becomes an integral part of motion." (215)

3. Galileo demonstrates that "uniform motion is indistinguishable in its effects from nonmotion." (216) "Uniform motion, therefore, is a relative concept." (217)

4. The Galilean principle of relativity

> . . . requires that the laws of mechanics be formulated so as to be the same to all inertial frames of reference. Physical laws are thus accorded a quality of invariance.
>
> In short, it is clear that a fatal blow has been delivered to the Aristotelian notion of absolute motion. It is also clear that the relative nature of motion, amply substantiated by experience, forms the foundation for Galilean physics. Nevertheless, we somehow find the notion of absolute motion difficult to part with, and wonder, almost instinctively, if there might not still exist an absolute frame of reference somewhere in this vast universe of ours to resurrect absolute motion to a post-Galilean glory. (218)

5. The law of inertia resulted from Galileo's comparison of the laws of the inclined plane with Aristotle's concept of motion.

> (Galileo) believed that these conclusions were a natural abstraction from observation, and summarized them in the form of a physical law. Referred to as the law of inertia, it may be stated as: An object, initially at rest or in uniform motion, would continue in the same state of rest or of uniform motion, in the absence of all external disturbances.
>
> The art of abstracting physical principles from experimental observation was Galileo's special gift. He did not, however, seek to generalize them beyond the domain of immediate observation. (220)

From the "Letter To The Granduchess Christina":

The following passages were emphasized.

> Some years ago, as Your Serene Highness well knows, I discovered in the heavens many things that had not been seen before our own age. The novelty of these things, as well as some consequences which followed from them in contradiction to the physical notions commonly held among academic philosophers. . . (203)

* * * *

> Persisting in their original resolve to destroy me and everything mine by any means they can think of, these men are aware of my views in astronomy and philosophy. They know that as to the arrangement of the parts of the universe, I hold the sun to be situated motionless in the center of the revolution of the celestial orbs while the earth rotates on its axis and revolves about the sun. They know also that

I support this position not only by refuting the arguments of Ptolemy and Aristotle, but by producing many counterarguments, in particular, some which relate to physical effects whose causes can perhaps be assigned in no other way. . . . therefore mistrusting their defense so long as they confine themselves to the field of philosophy, these men have resolved to fabricate a shield for their fallacies out of the mantle of pretended religion and the authority of the Bible. These they apply with little judgment, to the refutation of arguments that they do not understand and have not even listened to. (204)

* * * *

Contrary to the sense of the Bible and the intention of the holy Fathers, if I am not mistaken they would extend such authorities until even in purely physical matters--where faith is not involved--they would have us altogether abandon reason and the evidence of our senses in favor of some biblical passage, though under the surface meaning of its words this passage may contain a different sense. (206)

* * * *

The reason produced for condemning the opinion that the earth moves and the sun stands still is that in many places in the Bible one may read that the sun moves and the earth stands still. Since the Bible cannot err, it follows as a necessary consequence that anyone takes an erroneous and heretical position who maintains that the sun is inherently motionless and the earth movable.

With regard to this argument, I think in the first place that it is very pious to say and prudent to affirm that the holy Bible can never speak untruth--whenever its true meaning is understood. But I believe nobody will deny that it is often very abstruse, and may say things which are quite different from what its bare words signify. Hence in expounding the Bible if one were always to confine oneself to the unadorned grammatical meaning, one might fall into error. (207)

* * * *

This being granted, I think that in discussions of physical problems we ought to begin not from the authority of scriptural passages, but from sense-experiences and necessary demonstrations; for the holy Bible and the phenomena of nature proceed alike from the divine World, the former as the dictate of the Holy Ghost and the latter as the observant executrix of God's commands. It is necessary for the Bible, in order to be accommodated to the understanding of every man, to speak many things which appear to differ from the absolute truth so far as the bare meaning of the words is concerned. But Nature on the other hand is inexorable and immutable; she never transgresses the laws imposed upon her, or cares a whit whether her abstruse reasons and methods of operation are understandable to men. (208)

* * * *

For the Bible is not chained in every expression to conditions as strict as those which govern all physical effects; nor is God any less excellently revealed in Nature's actions than in the sacred statements of the Bible.

I should judge that the authority of the Bible was designed to persuade men of those articles and propositions which, surpassing all human reasoning, could not be made credible by science, or by any other means than through the very mouth of the Holy Spirit.

But I do not feel obliged to believe that the same God who has endowed us with senses, reason, and intellect has intended to forgo their use and by some other means to give us knowledge which we can attain by them. He would not require us to deny sense and reason in physical matters which are set before our eyes and minds by direct experience or necessary demonstrations. (209)

* * * *

And in St. Augustine we read: "If anyone shall set the authority of Holy Writ against clear and manifest reason, he who does this knows not what he has undertaken; for he opposes to the truth not the meaning of the Bible, which is beyond his comprehension, but rather his own interpretation; not what is in the Bible, but what he has found in himself and imagines to be there." (210)

* * * *

Moreover, we are unable to affirm that all interpreters of the Bible speak by divine inspiration, for if that were so there would exist no differences between them about the sense of a given passage. Hence I should think it would be the part of prudence not to permit anyone to usurp scriptural text and force them in some way to maintain any physical conclusion to be true, when at some future time the senses and demonstrative or necessary reasons may show the contrary.

No one should be scorned in physical disputes for not holding to the opinions which happen to please other people best, especially concerning problems which have been debated among the greatest philosophers for thousands of years. (211)

From "Galileo Galilei":

> Galileo's enormous contribution to the advancement of science has long been recognized. His importance rests in part on his scientific discoveries such as the law of inertia, his invention of the telescope, his astronomical observations, and his genius in proving the Copernican hypothesis. Of greater importance, however, is his role in the development of the methodology of science. Most previous natural philosophers, taking their cues from Aristotle, had made qualitative observations and categorized phenomena; but Galileo measured phenomena and made quantitative observations. This emphasis on careful quantitative measurements has since become a basic feature of scientific research.
>
> Galileo is probably more responsible than any other man for the empirical attitude of scientific research. It was he who first insisted upon the necessity of performing experiments. He rejected the notion that scientific questions could be decided by reliance upon authority, whether it be the pronouncements of the Church or the assertions of Aristotle. (201-202)

REACTION/SUGGESTIONS:

Students thoroughly enjoy the movie. It clarifies their understanding of Galileo's life and work. The addition of "Galileo's Science" also helps this topic. No future changes are proposed.

UNIT IV: THE OLD STATE VS. THE NEW STATE

DESCRIPTION OF THE UNIT:

This unit is a change of pace unit. In it, the old concept of state, the monarchy which was inherited from the feudal system, is compared to the new concept of state, the democracy which emerges from Renaissance capitalism. Machiavelli's Prince provides the model for ruling the old state and John Locke's Second Treatise on Government provides the model for the new state. In addition, Shakespeare's "Macbeth" and Voltaire's Candide give literary evidence of these political theories. Macbeth violates the rules Machiavelli lays down for a good prince and Candide replaces the idea of governing by privilege and divine right with the idea that people should be ruled by their own consent--that the people are the state.

This unit provides an opportunity to study four complete works of literature: The Prince, "Macbeth," Locke's essay and Candide and two films: Roman Polanski's "Macbeth" and a filmed version of Candide. (In addition to this variety, a local radio personality, Mr. Gene Burns, was invited to lecture on John Locke. He gave an exciting and stimulating lecture on "The Significance of John Locke's Ideas on Government.")

Much class time is devoted to small group discussions of each work. Students prepare for these discussions by completing worksheets for each assignment.
Time: 19½ hours

OBJECTIVES:

1. To contrast the old idea of state, the monarchy, with the new idea of state, the democracy.
2. To further introduce students to the study of complete works.
3. To help students see how ideas in one discipline directly affect others, in this case political theories influencing literature.
4. To change the pace of study during the semester.
5. To introduce students to writing a longer, critical essay in preparation for the research paper in Semester III.
6. To show the philosophical origins of American democracy in the political theories of John Locke.
7. To study a Shakespearean play.
8. To study The Prince.
9. To see the new ideas of state as a result of the economic change which took place in the Renaissance, the rise of capitalism.
10. To introduce students to satire via Candide.
11. To expose students to informed members of the community who are invited to speak as guest lecturers.

12. To examine the various interpretations literature undergoes when it is translated into film, i.e. "Macbeth" and Candide.

13. To continue using feature films as a source of knowledge and for variety.

CONTENT:

The Princes and the Powers of the Italian Renaissance
The Prince by Niccolo Machiavelli
"Macbeth" by William Shakespeare
"Macbeth" by Roman Polanski
Candide by Voltaire
John Locke
"An Essay Concerning The True Original Extent and End of Civil Government" (The Second Treatise) by John Locke

COMPETENCIES DEVELOPED:

#1, 2, 3, 4, 5, 7, 8, 9, 13, 15, 16, 17, & 18.

TESTING/EVALUATION:

There are two kinds of tests in this unit: short-answer, objective quizzes and one lengthy essay test. The quizzes are on the reading assignments to help students keep up with their assignments. The dates of these quizzes are announced. (copies follow)

The lengthy essay test is a take-home test. (The directions for the essay follow.)

REACTION/SUGGESTIONS:

Although this was a new unit and in spite of the fact it almost fell together by accident, it is one of the most successful ones. It captures the interest of both the students and the faculty. No changes are proposed.

IDS 1102
UNIT IV
Test Directions (sample)

ESSAY TEST - UNIT IV

DUE: THURSDAY, MARCH 18
PART ONE OF THE ESSAY OUTLINED BELOW

> "A state is a system of governing people in which the method of governing is derived from assumptions about the nature of the people being governed and the way the world in which they live works."

The theme of this unit is the old idea of state vs. the new idea of state. Since a state is a system of governing people in which the method of governing is derived from assumptions about the nature of the people being governed, the topic of your essay is:

HUMAN NATURE AND THE STATE -- OLD IDEAS VS. NEW

In The Prince, Machiavelli lays out quite clearly his assumptions about human nature and then constructs a state to govern the human nature he has defined. In "Macbeth" Shakespeare ~~con~~firms many of Machiavelli's assumptions about human nature through his main character, Macbeth, and also validates Machiavelli's advice on governing by the evolution of events in the play. The Prince and "Macbeth" represent the old ideas of human nature and the state while Locke's "Second Treatise on Government" and Voltaire's "Candide" reflect the new ideas. Locke also clearly defines his assumptions about human nature and, like Machiavelli, constructs a state to govern this human nature. Candide confirms Locke's assumptions and concept of state when he discovers El Dorado.

Your assignment is to write an essay on this topic in which you analyze each concept of state, include ideas and quotations from each of the four works mentioned above, and compare and contrast these two ideas of state. Your essay should include:

PART ONE: The Old Idea of State

1. Machiavelli's assumptions about human nature. Select 3 or 4 of his main ideas.
2. Machiavelli's definition of state; his advice for governing. Select 3 or 4 main ideas.
3. Explanation of how 1 above leads to 2 above.
4. Examples from "Macbeth" which confirm 1 above.
5. Examples from "Macbeth" which validate 2 above.

PART TWO: The New Idea of State

1. Locke's assumptions about human nature. Select 3 or 4 of his main ideas.
2. Locke's definition of state; his system of governing. Select 3 or 4 main ideas.
3. Explanation of how 1 above leads to 2 above.
4. Examples from "Candide" which confirm 1 above.
5. Examples from "Candide" which confirm 2 above.

PART THREE: Comparison and Contrast

1. Compare/contrast the old idea of human nature with the new.
2. Compare/contrast the old state with the new state.

SUGGESTED OUTLINE FOR ESSAY TEST UNIT IV

Below is a *suggested* outline. You are *not* required to follow it. Attach a copy of the outline you use to the front of your paper when you turn it in.

- I. The Old Idea of State
  - A. Introduction to Part I
    - 1. Simple definition of old idea of state (sentence)
    - 2. Introduction to *The Prince* and Machiavelli
      - a. *The Prince*
        identification and overview of the work
      - b. Machiavelli
        description of who he was
      - c. Statement of the importance of *The Prince* to your essay
  - B. Machiavelli's assumptions about human nature
    - 1. Overview of his assumptions
    - 2. Assumption #1
      - a. explanation of assumption
      - b. supporting quotation
        - 1b. context of quotation
        - 2b. quotation
        - 3b. explanation of quotation
        - 4b. relationship of quotation to assumption
    - 3. Assumption #2
      - a. explanation of assumption
      - b. supporting quotation
        - 1b. context of quotation
        - 2b. quotation
        - 3b. explanation of quotation
        - 4b. relationship of quotation to assumption
    - 4,5,6,*etc*. (as needed, same as 2 & 3 above)
  - C. Machiavelli's concept of state; advice for governing
    - 1. Overview of his concept/advice
    - 2. Characteristic #1
      - a. explanation of characteristic
      - b. supporting quotation
        - 1b. context
        - 2b. quotation
        - 3b. explanation of quotation
        - 4b. relationship to characteristic
    - 3. Characteristic #2
      - a.,b. same as 1 above
    - 4,5,6,*etc*. as needed, same as 1 above
  - D. Introduction of Shakespeare's "Macbeth"
    - 1. "Macbeth"
      identification and overview of the work
    - 2. Shakespeare
      description of who he was
    - 3. Statement of the importance of "Macbeth" to your essay
  - E. Macbeth and human nature
    - 1. Example to support B.2. above
      - a. context
      - b. quotation

c. explanation
d. relationship to Machiavelli's concept of human nature

NOTE: In finding examples from "Macbeth", one example might cover several points made in "B" above. Or several key examples may be selected. You do not have to have a different incident and/or quotation from "Macbeth" for each item in "B" and "C" above.

2. Examples to support B.2 above
    a. context
    b. quotation
    c. explanation
    d. relationship

3,4 & 5 as needed; same as 1 & 2 above

F. Macbeth and the state
    1. Example to support idea in "C" above
        a. context
        b. quotation
        c. explanation
        d. relationship
    2,3,4,5 etc. as needed; same as above

G. Statement of explained definition of human nature and state. Re-iteration of main ideas developed so far.

II. The New Idea of State

Follow the outline for I above using Locke in place of Machiavelli and "Candide" in place of "Macbeth."

III. Compare and Contrast

A. Compare IG to IIG
B. Contrast IG to IIG
C. Draw conclusion about the significance of the old state vs. the new state

ALL PAPERS ARE DUE ON THE DATE ANNOUNCED. PLEASE TYPE YOUR PAPER OR WRITE IT NEATLY IN PEN. NO PENCILS, PLEASE!

IDS 1101
Unit IV
Quiz: The Prince

Name ______________________

Directions:

1. Read each statement carefully.
2. If the statement is true, circle "T" and go on to the next statement.
3. If the statement is false, circle "F", underline the word (or words) which make the statement false, and write the correct word (or words) on the lines below the statement.

T F 1. In the "Introduction" to The Prince, the translator states that Machiavelli was motivated to write this book by crass opportunism.

____

____

T F 2. Machiavelli's chief contribution to political thought lies in his freeing political action from moral consideration.

____

____

T F 3. Machiavelli dedicates The Prince to Pope Julius II.

____

____

T F 4. In The Prince, Machiavelli describes four kinds of principalities: hereditary, mixed, new and ecclesiastical.

____

____

T F 5. Machiavelli claims it is difficult to maintain power in a mixed principality because of the willingness of men to exchange one ruler for another.

____

____

T F 6. Regarding new principalities, Machiavelli claims they are easily gained and just as easily held.

____

____

T F 7. Machiavelli claimed that the Prince who came to power with the help of the nobles would not find it as difficult to maintain power as the Prince who came to power through the help of the people.

T F 8. Machiavelli places a great emphasis on the Prince making good laws and having good arms.

T F 9. Of the various kinds of troops a Prince might have, Machiavelli claims mercenaries are the most reliable and native troops the least reliable.

T F 10. Machiavelli advises that the Prince who strives after goodness in all his acts is sure to come to ruin since there are so many men who are not good.

T F 11. Machiavelli believes that a wise Prince should be very generous with his friends and his people.

T F 12. With respect to the question of whether a Prince should be loved or feared, Machiavelli answers that it is better for a Prince to be loved than to be feared.

T F 13. Machiavelli believes a wise Prince should not only appear to be merciful, faithful, humane, frank and religious, he should also be all these things.

T F 14. Machiavelli believes that a wise Prince can and should break his promises when these are against the best interests of the state.

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T F 15. Machiavelli warns against a Prince having ministers who can neither think for themselves nor understand the thinking of others.

____

____

T F 16. Machiavelli considers flatterers pests.

____

____

T F 17. Machiavelli claims the Princes of Italy have lost their state because they: lacked arms of their own; did not know how to unite their people; and did not know how to protect themselves against nobles.

____

____

T F 18. Machiavelli believes Fortune is the only decisive influence on human affairs.

____

____

T F 19. Machiavelli ends The Prince by calling for a redeemer who can free Italy from the threat of foreign domination.

____

____

T F 20. Throughout The Prince, Machiavelli uses two kinds of examples, Biblical and contemporary, to support his ideas.

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IDS 1102
UNIT IV
QUIZ: MacBeth

Name________________________________

Directions:

1. Read each statement carefully.
2. If the statement is true, circle "T" and go on to the next statement.
3. If the statement is false, circle "F", underline the word (or words) which make the statement false, and write the correct word (or words) on the lines below the statement.

T F 1. When Duncan, King of Scotland, discovers that the Thane of Cawdor has been a traitor, he gives the title to Macbeth.

T F 2. When riding, Macbeth and Banquo meet three witches who hail both men as the fathers of kings.

T F 3. When Macbeth hears Duncan proclaim his son, Malcolm, "Prince of Cumberland" he is not concerned.

T F 4. Lady Macbeth tries to discourage Macbeth from killing Duncan.

T F 15. When Macbeth is elected and crowned King of Scotland, Macduff reluctantly attends the coronation at Scone.

T F 16. Macbeth, fearing a plot against his rule, has Banquo and his son, Fleance, killed by two hired assassins.

T F 7. The ghost of Fleance disrupts the feast celebrating Macbeth's coronation and frightening Lady Macbeth.

____

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T F 8. Becoming fearful and suspicious, Macbeth demands another meeting with the three witches in order to learn more about the future.

____

____

T F 9. Macbeth, fearing Macduff, takes Macduff's wife and son hostage.

____

____

T F 10. When Malcolm and Macduff meet in England, Malcolm immediately trusts Macduff.

____

____

T F 11. Safe in England, Malcolm and Macduff convince the King of England to give them men and material to fight Macbeth.

____

____

T F 12. Although Macbeth begins to suffer from his multiple plotting and intrigues, Lady Macbeth remains strong and confident.

____

____

T F 13. The English commander, Siward, kills Lady Macbeth.

____

____

T F 14. When Macbeth hears that "Birnam Wood" is moving toward the castle, Dunsinane, he is not disturbed.

____

____

T F 15. Macduff corners Macbeth and offers to allow him to commit suicide.

____

____

T F 16. Macbeth is not afraid of dying since the witches told him he could not be killed by a man of woman born.

____

____

T F 17. When Macbeth hears of his wife's death, it drives him insane.

____

____

T F 18. Macduff learns that his wife and son were killed because they plotted to kill Macbeth.

____

____

T F 19. In "Macbeth", all but one of the witches' prophesies come true.

____

____

T F 20. Unlike Macbeth, pious Edward and King Duncan embody Shakespeare's ideal of kingship.

____

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THE OLD STATE VS. THE NEW STATE:
MACHIAVELLI'S THE PRINCE

RATIONALE FOR TOPIC:

Machiavelli's The Prince provides a model of the old idea of monarchy because it is a handbook for a monarch. Machiavelli's ideas are often quoted and more often misquoted. Therefore, students are ready to read the book because it's value is already apparent to them. Studying the complete work allows them to see how Machiavelli unfolds his theory of government and supports it with his knowledge of contemporary Italian politics and ancient Roman history.

DESCRIPTION OF LEARNING ACTIVITY:

Students meet in the large group for an introductory lecture on Machiavelli and the old idea of state. Then they meet in small groups to discuss The Prince. They prepare for this discussion by answering a series of study questions.
Time: 4 hours

READING ASSIGNMENT:

"The Princes and the Powers of the Italian Renaissance" from E. R. Chamberlain, The Fall of the House of Borgia, New York: The Dial Press, 1974, pp. ix-xvi.

This is a historical overview of the political situation in Italy during the Renaissance.

The Prince by Niccolo Machiavelli, translated by Daniel Donno, New York: Bantam Books, 1966.

This edition includes The Prince, an excellent introduction to Machiavelli and selections from The Discourses Upon the First Ten Books of Titus Livy.

MAIN IDEAS STRESSED:

From the introductory lecture:

The term, "Machiavellian," is still used today. His influence remains in language and in modern ideas.

1. Machiavelli was an experienced politician and had fourteen years as a secretary, learning and examining the nature of politics.

2. Machiavelli is part of a larger revolution of thinking going on in this century.

3. The political situation in Italy (ref.: "The Princes and Powers of the Italian Renaissance") is that there are five separate powers: Milan, Venice, Florence, Naples, Rome. Murder, intrique, jockeying for power are all part of Machiavelli's world. This was an anachronism in Europe where nation-states were arising, i.e. England, France and Spain. It should also be noted that Machiavelli lives in a period where foreign invasion of Italy is always on-going.

4. Machiavelli is accurate in his assessment of the political situation and his prescription for it. However, he was ignored by the Medici.

5. Machiavelli's Life (1469-1527)
   The Prince 1513

6. Machiavelli has been credited with:

   1) modern analysis of power
   2) innovator who upset the world
   3) revolutionary--grammar of power
   4) secular view--machinery of power
   5) empirical view/reason
   6) rescuer of Italy from foreigners

7. What Machiavelli saw:

   1) Italy, fragmented and in ruin. He called for a national hero, unifier.
   2) Incredible corruption and intrigue.
   3) Disunity--weak, divided, plagued by feuds.

8. The Prince:

   a) Does not separate politics and ethics but creates a new idea of good.
   b) History of The Prince; first printed in 1532; Machiavelli's reports, clear and accurate.
   c) In form and style, The Prince is a medieval mirror for Princes; literature laced with Biblical/religious advice.
   d) Modern-based on evidence, observation and history. Chooses examples to fit his hypothesis. (reflects Renaissance)
   e) 1589 he was burned in effigy by Jesuits, book based on Index of Prohibited Books.

9) Message of The Prince:

   a) Welfare of the state is the only good. Prince's only concern.
   b) People are fickle, greedy, selfish.
   c) Prince is fox and lion. Public face vs. private face. (The prince is the state) Obligation to break faith at times.
   d) Fortune rules only half of man's actions (daring and wisdom are the other half).
   e) Politics is an art, a form of rhetoric.

From the Discussion:

A. State:

"A system of governing composed of underlying assumptions and a method of governing (procedures and practices)"

B. Machiavelli's Underlying Assumptions:

1. Human nature
   - all men are basically the same although there are a few who excell
   - men are basically out for themselves, for personal gain, and are selfish, untrustworthy and greedy

- reason and intellect are what separates man from animals
- men have free will (50% of human actions)

2. The real is preferred to the ideal
   - in politics, idealism leads to ruin
   - realism (what is and was) is important

3. War is the natural state of man

4. Fortune (the future) can be anything; the universe is unpredictable--always changing. (50% of human affairs.)

5. Men need a Prince to lead them by example; because the Prince is a man he is also led by example.

6. The Prince is the state
   - the Prince is the all-powerful lawmaker and judge--the personification of the laws
   - everything the Prince does is reflected in the state; the conditions of the state reflect on the Prince's ability

C. A Prince Should:

1. Maintain the good will of the people.
2. Extinguish rival noble families in a newly won principality.
3. Reside in his principality.
4. Quell disorders quickly.
5. Be accessible to subjects; rule directly.
6. Defend less powerful neighbors to ally them to him.
7. Weaken strong neighbors by uniting their weaker opponents.
8. Emulate--but not copy--great men of the past.
9. Rely on own arms.
10. Rely on own ability.
11. Consolidate his state.
12. Guard against enemies.
13. Gain allies (not too powerful).
14. Use force and fraud when necessary.
15. Be loved and/or feared.
16. Be respected by his troops.
17. Reform and modernize old institutions.
18. Be severe.
19. Be cordial.
20. Be magnanimous, liberal.
21. Abolish disloyal militia/create a loyal one of native troops.
22. Preserve friendship of kings and princes so they favor you.
23. Use cruelty properly.
24. Reward the faithful and guard against the ambitious.
25. Exhibit courage.
26. Command effectively.
27. Be undismayed by adversity.
28. Keep up subjects morale.
29. Be able to field an army and take the offensive; or provide fortress for a year-long seige.
30. Always be prepared to go to war.

31. Hunt.
32. Study military history.
33. Be miserly with his own and subjects funds; liberal with others.
34. Avoid being hated.
35. Rely upon himself.
36. Appear to be merciful, frank, humane, faithful and religious.
37. Undertake great deeds to keep subjects filled with awe and admiration.
38. Act as a true ally or enemy.
39. Support and honor men of talent and ability.
40. Encourage trade and agriculture (business).
41. Reward those who enrich the city.
42. Offer festivals and spectacles.
43. Meet regularly with guilds and corporations.
44. Keep in mind the dignity of his position.
45. Select ministers of intelligence and good character.
46. Avoid flatterers.
47. Make provisions for changes in forture.
48. Be daring and aggressive.

D. A Prince Should Not:

1. Alter existing law or taxes in a new principality.
2. Use foreign arms.
3. Assume a state easily won is easily held.
4. Use excessive cruelty.
5. Neglect defenses.
6. Use mercenaries or auxiliary troops.
7. Plunder subjects' property.
8. Take subjects' women.
9. Be fickle, frivolous, effeminate, cowardly, or irresolute.
10. Be neutral.
11. Believe conditions never change.

REACTION/SUGGESTIONS:

This topic goes well. No changes are planned.

IDS 1102 STUDY SHEET
(typical handout)

1. Niccolo Machiavelli (1469-1527) THE PRINCE, 1513

2. William Shakespeare (1564-1616) MACBETH (1606)

> What genuine painters do is to reveal the underlying psychological and spiritual conditions of their relationship to their world; thus in the works of a great painter we have a reflection of the emotional and spiritual condition of human beings in that period of history. If you wish to understand the psychological and spiritual temper of any historical period, you can do no better than to look long and searchingly at its art.
>
> Rollo May, THE COURAGE TO CREATE

INTRODUCTION:

If what Rollo May says is true for writers as well as painters, then Machiavelli and Shakespeare tell us somethings about their time, its values and ideas--its reality. In addition to various other concerns, Machiavelli and Shakespeare are interested in the form and quality political power assumes. For Machiavelli and Shakespeare the ruler (Prince or King) is the state. All power and responsibility are his. For these writers notions about a social contract between ruler and citizens, and participatory democratic processes must wait for another period in history. For the present, however, "both artists reveal the psychological and spiritual temper of their time."

There is much that is strikingly modern and secular about the 'advice' Machiavelli gives to his Prince. And yet for Shakespeare, the medieval idea of a universe divinely ordered throughout, is central to his thinking. For Shakespeare, Kings rule by Divine Right.

Machiavelli writes an essay detailing how a wise Prince may gain power, and keep it. Shakespeare writes a play about the quality of kingship and the ruler's relationship to the order and health of the nation. For Machiavelli, might makes right and the end justifies the means. To Shakespeare, the King is a symbol of order and justice. Machiavelli warns that if a Prince is foolish he will lose his principality. Shakespeare shows how a tyrant, a destroyer of the divinely ordered plan, must be defeated if the world is to be restored to order. Machiavelli sees no such scheme operating.

DIRECTIONS FOR COMPLETING ASSIGNMENT SHEETS:

Since these two works are very different, the preparation necessary to understand them is different. WHEN ASSIGNED: ****

1. Read THE PRINCE. (Also the introductory material). Answer the questions about THE PRINCE attached to this sheet, note page numbers where you located the answer.
   *Due: March 2, 1982

2. Read Shakespeare's MACBETH. (Also the introductory material). Answer the questions attached to this sheet, note page numbers where you found the answers.
*Due: March 9, 1982

3. There are several discussion questions linking both works. You are now ready to answer these questions. BRING YOUR COMPLETED ANSWER SHEETS TO YOUR BETA GROUP. BE PREPARED TO DISCUSS YOUR ANSWERS IN CLASS.
*Due: March 16, 1982

ASSIGNMENT #1

Introduction pps. 1-11

1. Explain how Machiavelli could say, "I love my country more than my soul".... and then write THE PRINCE.
2. What is Machiavelli's chief contribution to political thought?
3. What is the relationship between Prince and Law?
4. What is Machiavelli's aim in THE PRINCE?
5. To whom is THE PRINCE dedicated? Who is he?

Chapters I-11

1. Machiavelli describes four kinds of principalities, what are they? List.
2. Of the four kinds of principalities described, the New is the most common during the Renaissance. Machiavelli devotes considerable time to defining this form of principality. What are its qualities and characteristics? What does Machiavelli warn the Prince to do? Not to do?

Chapters 12-14

1. In this section, Machiavelli discusses military strength. What kind of troops should a wise Prince employ and why?
2. With what should a wise Prince be ultimately concerned? Why?

Chapters 15-23

1. What are the qualities of a good/wise Prince?
2. Why does Machiavelli caution against the Prince becoming hated?
3. To Machiavelli, is it important that the wise Prince keep his word? Why?
4. Is neutrality a good policy for a Prince to pursue? Why?
5. What kind of counselors should a wise Prince cultivate? Avoid? Why?

Chapters 24-26

1. Why did the Italian Princes lose their states?

2. What role does Fortuna play in the affairs of men?

3. Does Machiavelli advise his wise Prince to be cautious? Why?

4. What does Machiavelli want the wise Prince to do?

ASSIGNMENT #2: MACBETH

1. Read Shakespeare's play MACBETH -- from beginning to end.

2. In addition, read the introductory material found on pages vii-xxv.

3. After reading the play, complete the "Fill in the Blanks" assignment on this page. When you do, you will have a clearer idea of "what happens"....i.e., you will understand the play on a narrative level. This is vital, since once you understand the 'action' and have the principle players sorted out, then we can begin to discuss the whys, the relevance, and form of the play.

ACT I

Two scottish generals ________________ and ________________, upon their return from battle, are accosted by ______________________ ______________________. They hale __________ as "Thane of Glamis and Thane of Cawdor." Further they declare ______________________ will be the future ________________ of ______________________.

ACT II

______________________ and his wife ______________________ murder King ________________ in their home where he has come as a ____________________________. The dead King's sons ______________ and ______________ flee Scotland in terror. They go to __________ and ______________. Since the sons are gone and ________________ is the next heir to the throne of Scotland, he is crowned ________________ of ______________.

ACT III

The weird sisters had promised ____________________ that his children should one day rule Scotland. Therefore __________________, fearful, and wishing to make his throne secure, plots to ______________________ Banquo, and his only son ___________________. The plan miscarries. _____________________ escapes, although _____________________ is murdered.

ACT IV

Meanwhile, at Machbeth's feast, the bloody _________________________ of __________________ appears. He is seen by only ________________. Alarmed, because of __________________ behavior, the banquet breaks up in disorder. Suspicious and harried ___________________________ obtains a second interview with the _______________________. He meets the Goddess of witches, ______________________. The _______________ warns _____________________ that no man can harm him. _______________ is invincible until "________________________ wood to ________________ comes." Further, ___________________ is warned against the man ____________________ of woman. In anger Macbeth revenges himself upon the missing Macduff by having ___________________ and the ____ killed despite her pleas.

ACT V

Almost insane over her part in Duncan's murder ______________________ walks in her sleep trying to __________________________ from her _______________________. When____________________ hears that truly _______________________ wood is marching against him, he is not afraid because he believes himself to be _________________________. Rushing madly into battle ________________________ meets ___________________ who was, "____________________ womb untimely ripp'd." In the duet that follows _____________________ is slain by __________________________ and _____________________ is hailed as king of _____________________ Restoring peace and order to the kingdom.

ASSIGNMENT #3

1. Why does Macbeth kill King Duncan?
2. Why does Macbeth want the throne of Scotland?
3. How does Macbeth attempt to keep the fact that he murdered the King hidden from the nobles?
4. Who are the people that Macbeth and his wife murder?
5. Why does Macbeth listen to the witches?
6. Did Macbeth have a choice in what he did? Could he have stopped himself?
7. Would Machiavelli have approved of the line of action Macbeth took to make himself "a Prince." Why?
8. Would Machiavelli have approved of Macbeth's actions after he became "THE PRINCE"? Why ?
9. Could Macbeth have learned something about maintaining power from Machiavelli? What?
10. Did Macbeth 'fail' Political Science 101 taught by N. Machiavelli? Why?

IDS 1102
Course Outline (to students)

UNIT IV: THE OLD STATE VS. THE NEW STATE

This unit is our change of pace unit. In it we compare the old concept of state, the monarchy which was inherited from the feudal system, to the new concept of state, the democracy which emerges from Renaissance capitalism. Machiavelli's Prince provides the model for ruling the old state and John Locke's Second Treatise on Government provides the model for the new state. In addition, Shakespeare's "Macbeth" and Voltaire's Candide give literary evidence of these political theories. Macbeth violates the rules Machiavelli lays down for a good prince and Candide replaces the idea of governing by privilege and divine right with the idea that people should be ruled by their own consent--that the people are the state.

This unit gives you the opportunity to study four complete works of literature: The Prince, "Macbeth," Locke's essay and Candide and two films: Roman Polanski's "Macbeth" and a filmed version of Candide.

Much of your class time will be devoted to Beta group discussions of your reading assignments. You should prepare for these by reading and answering the study questions.

The objectives we hope to meet in this unit are:

- To contrast the old idea of state, the monarchy, with the new idea of state, the democracy.
- To further introduce you to the study of complete works.
- To help you see how ideas in one discipline directly affect others, in this case political theories influencing literature.
- To change the pace of study during the semester.
- To introduce you to writing a longer, critical essay in preparation for the research paper in Semester III.
- To show the philosophical origins of American democracy in the political theories of John Locke.
- To study a Shakespearean play.
- To study The Prince.
- To see the new ideas of state as a result of the economic change which took place in the Renaissance, the rise of capitalism.
- To introduce you to satire via Candide.
- To examine the various interpretations literature undergoes when it is translated into film, i.e. "Macbeth" and Candide.
- To continue using feature films as a source of knowledge and for variety.

During this unit you will have several graded activities: several short-answer quizzes, an annotated Bibliography and a lengthy essay test (directions follow). Please consult your daily outline below for due dates.

WEDNESDAY, MARCH 2:

9:00 - 10:00	Lecture: Introduction to Unit IV and The Prince
10:00 - 11:00	Lecture: Doing Library Research
11:00 - 11:50	Test on Unit III

MONDAY, MARCH 7:

9:00 - 9:20	Beta - Quiz on Machiavelli. No make-ups.
9:20 - 10:45	Beta - Discussion of The Prince
10:45 - 10:55	Break
10:55 - 11:50	Alpha - Lecture: Introduction to "Macbeth"

WEDNESDAY, MARCH 9:

*** Assignment for today: Read "Macbeth" and answer study questions.

9:00 - 11:50	Alpha - Film: "Macbeth" (Roman Polanski's version)

MONDAY, MARCH 14:

*** Assignment for today: Review "Macbeth" for quiz.

9:00 - 9:20	Beta - Quiz on "Macbeth". No make-ups.
9:20 - 10:40	Beta - Discussion of "Macbeth".
10:40 - 10:50	Break
10:50 - 11:50	Beta - Discussion of "The Old State," Correlation of "Macbeth" and The Prince.

WEDNESDAY, MARCH 16:

*** Assignment for today: Read Candide by Voltaire. Make a list of the people, institutions, customs, etc. which Voltaire satirizes. Part I of essay test due today.

9:00 - 10:45	Alpha - Video tape: "candide"
10:45 - 10:55	Break
10:55 - 11:50	Break - Discussion of Candide.

MONDAY, MARCH 21:

*** Assignment for today: Read John Locke's Treastise on Government, pp. 233-248. Underline important points. Outline new idea of state. Read "Comparison" in McCrimmon, pp. 66-70. Complete annotated bibliography.

9:00 - 10:30	Beta - Discussion of Locke/New State
10:30 - 10:40	Break
10:40 - 11:50	Beta - Discussion Old State vs. Comparison - New State

MONDAY, MARCH 23 - BEGIN UNIT V

*** Assignment for today: Read "The Creative Process of Science," handout, and Francis Bacon, pp. 259-268. Underline important points. Key terms and study questons.

9:00 - 9:45	Alpha - Introduction to Unit IV
9:50 - 10:50	Beta - Discussion of Francis Bacon
10:50 - 11:00	Break
11:00 - 11:50	Alpha - Introduction to Descartes

MODAY, MARCH 28:

*** Assignment for toady: Read Descartes, pp. 249-258. Underline important points. Key terms and Study Questions.

9:00 - 10:15	Beta - Discussion of Descartes
10:15 - 10:30	Break
10:30 - 11:50	Alpha - Discussion of Descartes' and Bacon's contribution to scientific method

WEDNESDAY, MAY 30:

*** Assignment for today: Read Newton, pp. 269-270, 271-297. Underline important points. Key terms and Study Questions. Complete "Old State/ New State" paper. Due today.

9:00 - 11:50	Alpha - Lecture/Demonstration: Newton's Science. Turn in "Old State/New State" paper

MONDAY, MARCH 4:

9:00 - 10:30	Alpha - Lecture: Newton's Science
10:30 - 10:45	Break
10:45 - 11:50	Alpha - Review for Unit V Test

LAST DAY OF CLASS - EXAMS BEGIN WEDNESDAY, APRIL 6.

THE PRINCE

Dedication to Lorenzo

This book is M's greatest gift since it reflects his long and careful study
(experience and reading) (12)
It is set forth in a simple style (12)

Chapter I

All states have been either principalities or republics: (13)
Principalities are either hereditary or new -
either accustomed to prince or freedom -
acquired either by fortune or by ability (13)

Chapter II: Hereditary Principalities

Those accustomed to a Prince are more easily kept than those not:
- people are used to him
- feel natural affection
- Prince needs less drastic measures to govern (13-14)

Chapter III: Mixed Principalities

More difficult to govern:
People willing to change lords -
bad decision because:
(1) soldiers and conquest will distress people (14)

A Prince always needs good will of the people (15)

Reconquered states - more easily won first time than second:
- Prince knows who to punish
- plays on (1) above (15)

To hold a newly conquered territory a Prince must:
1) extinguish royal family
2) not alter laws or taxes

Where languages and customs are similar, it is easy to join two territories. (15)
Where language, customs and laws are different, Prince must:
1) reside there
    a. quell disorders
    b. give subjects access to him
    c. deter foreign enemy
2) establish colonies
    a. cheaper than an army
3) defend less powerful neighbors, weaken strong neighbors. Allies - "Consolidate" power
    ex. Romans in Greece (16-17)
4) these things must be done in advance to defer trouble
5) Louis, an example of what not to do

War cannot be avoided only deterred (p. 18 and 20)

"He who causes another to become powerful ruins himself..." (p. 21)

Chapter IV: Alexander's Successors/His Kingdom

Alexander's successors were able to keep Darius' kingdom because it had been ruled by an absolute monarch with servants, not an independent nobility like France. (21-24)

Chapter V: How to Govern States Newly Acquired and Used to Own Laws

There are three ways to hold a previously free state:

1) destroy it
2) live in it
3) let it have its own laws, take tribute; set up representative government

#1 and 2 only secure ways
#3 - city never forgets old freedom (24-25)

Chapter VI: New Principalities Achieved by One's Own Arms and Ability

Rulers should emulate great men of past - although not copy exactly; modify. (25)
Although both ability and fortune play a role, ability is more reliable (26) - helps men recognize opportunity
It takes time to accustom people to the form a new rule takes. A Prince needs means (arms) to enforce his ideas
ex.: Savonarola, unarmed
Hiero of Syracuse, armed
Exertion required to keep above, but thereafter it is easier to maintain.

Chapter VII: New Principalities Acquired With Arms and Fortunes of Others

Fortune is not as trustworthy as ability, yet Cesare Borgia is a good example of a man of ability who gains a new principality by fortune and loses it by such. (28)

C. Borgia acquired Romagna through the efforts of his father Pope Alexander VI having come to power through an alliance with Orsini and the French (through the arms of others). C. Borgia vowed to raise his own army and secure his new state. To do this, he followed Machiavelli's earlier example of a good Prince. He:

1) established peace in Romagna through a cruel despot
2) later replaced despot with a civil tribunal
3) had despot killed, body publically exhibited to win affection of people
4) extinguished lines of opposing lords
5) gained allegiance of Roman nobles
6) gained allegiance of many cardinals
7) prepared to expand his power through all of Tuscany (30-32)
8) consolidated his own state

However fortune (death of his father) and his own ill-health cut short his plans. (33)

From his example, Machiavelli concludes Princes should:

1) guard against enemies
2) gain allies
3) win either by force or fraud
4) be loved or feared by (your) subjects
5) be respected and obeyed by troops
6) annihilate those who will attack you
7) reform and modernize old institutions
8) be severe, yet cordial
9) be magnanimous and liberal
10) abolish disloyal militia/create loyal one
11) preserve friendship of kings, princes so they will favor you or oppose you cautiously (34)

Chapter VIII: Princes by Evil Means

Machiavelli discusses two examples of princes who come to power through evil means, Agathocles of Sicily and Olivetto da Fermo. (35-37)
He concludes that there is a proper and improper use of cruelty.
The proper use is to eliminate rivals all at once, thereafter to decline in use of cruelty.
The improper use to frequently repeat cruel acts (beacuse of its effect on people).
Cruelty is a preventative measure; can be used as a deterrent; not effective in extreme circumstances.

Chapter IX: Civil Principality

A civil principality exists when a citizen is elevated to Prince through the support of the nobles or the people. Machiavelli believes it is better to come in through the support of the people. (More easily governed; no rivals for power; interested only in being freed from oppression.) Machiavelli gives advice on handling nobles - reward faithful, be on guard against ambitious - and concludes by saying the Prince who rules directly, rather than through magistrates, has the best position. (39-40)

He lists the characteristics of a good Prince:

1) man of courage
2) able to command
3) undismayed by adversity
4) does not neglect defenses
5) keeps up subjects' morale by orders and examples

Chapter X: Measuring the Strength of Principalities

A strong Prince is one who can field an army and take the offensive. (42)
Lacking this, a Prince should fortify his city:

- moats and walls
- provisions and work for 1 year
    - he gives the German cities as examples. (43)

"A prince in possession of a strong city who avoids arousing hatred is beyond danger of attack" (43)

Chapter XI: Ecclesiastical Principalities

Machiavelli states that "Ecclesiastical princes alone can hold states without defending them, and subjects without governing them." (44) Then he traces the growth of Papal power under Alexander VI and Julius II (44-46)

Chapter XII: Various Kinds of Troops

Two things are necessary for a strong state: strong laws and sound military, the latter ensures the former.
Of the three kinds of troops: native, mercenary or auxiliary, native troops are best because of their devotion, willingness to fight. (46-47)
Italy has been ruined by mercenary troops who are really unwilling to fight. (47-48)
A prince should be the commander of his forces. (47)

Chapter XIII: Concerning Auxiliary, Mixed and Native Forces

Auxiliary troops, those supplied by a foreign power. Such forces are useful and trustworthy only in pursuit of their own interests. (50-51)
Machiavelli says these troops are more dangerous than mercenaries. (51)
Cesare Borgia is an example of the good use of auxiliaries. Louis XII is a bad example. (53)
Philip and Alexander are good examples of classical use of its own troops (53) - "no state, unless it has its own arms, is secure." (53)

Chapter XIV: A Prince's Concern in Military Matters

A Prince should never have any concern but waging war. It is his profession. (53) This is necessary in peace time. The prince should hunt to learn the topography of his country and he should study history so that he can emulate the great military men of the past. (54-55)

Chapter XV: Things for Which Princes are Praised or Censured

Machiavelli introduces the subject of the prince's attitude and conduct toward his subjects. He repeats that he is dealing with fact - not fiction. (p. 56-57)

Chapter XVI: Liberality/Parsimony

A Prince is better off if considered miserly than generous. Generosity is too expensive - leads to excessive taxation and ruin. However, it is okay to be generous with other's money. Miserliness is a vice necessary for an efficient ruler. (58-59)

Chapter XVII: Loved/Feared

It is better to be considered kind than cruel, but it is better to use cruelty to keep the state strong and united than to lose it through kindness. (59)
It is best to be both loved and feared, but the Prince should avoid being hated (causes of hatred: plundering property or taking wives of subjects). (60)
"A wise Prince must rely upon what he and not others can control." (61)

Chapter XVIII: Keeping Their Word

Princes who accomplish great things are those who know when to break their word. (62)
The good Prince is a lion and a fox (62)
The good Prince appears to be:
    merciful
    frank
    humane
    faithful
    religious (63)

"men judge by the eye rather than the hand.... All men will see what you seem to be; only a few will know what you are." (63-64)

Chapter XIX: Avoiding Contempt and Hatred

Machiavelli re-iterates that a Prince can avoid hatred by not seizing his subjects property or their women.
He can avoid contempt if he is NOT: fickle, frivolous, effeminate, cowardly, or irresolute.
He must display: greatness, boldness, gravity and strength.
His external threat is foreign invasion and his internal threat is the people.
Therefore he should follow the examples of Septimus Severus and Marcus Aurelius.
(Machiavelli discusses all of the Antonine Emperors in great detail). (64-72)

Chapter XX: Fortresses

Arming your own subjects is a good policy since it makes them loyal to you. However, subjects in an annexed state should be disarmed or weakened since they represent a threat. Fortresses protect princes from their subjects but do not hold territories. (73-76)

Chapter XXI: What A Prince Must Do To Be Esteemed

The Prince should always undertake great deeds to fill his subjects with wonder and admiration, to demonstrate his excellent ability. (76-77)
He should act as a true ally or true enemy. (77)
He should also:
1) support and honor men of talent and ability
2) encourage trade and agriculture (business in general)
3) reward those who enrich the city
4) offer festivals and spectacles
5) meet with guilds and corporations
6) keep in mind the dignity of his position (79)

Chapter XXII: Concerning Ministers

The Prince will be judged by his ministers. He should select those who are capable of thinking for themselves. He must judge their character carefully and pay them due respect to cement their loyalty. (79-80)

Chapter XXIII: Avoiding Flatterers

The Prince must avoid flatterers. He must encourage his ministers to tell the truth when he asks for their advice. He must retain the final decision. (81)
"A prince who is not wise himself cannot be wisely counseled." (82)
"Men will always prove bad unless necessity compels them to be good." (82)

Chapter XXIV: Why Italian Princes Lost Their States

Machiavelli begins by stating that if a new Prince follows his advice he will appear to be an "old" Prince. (82)
The Italian princes lost their states because they believed once the state was gained, it would always remain theirs. However, nothing remains the same. (83)

Chapter XXV: Fortune's Influence

Fortune controls one half of man's actions but the other half belongs to free will which can anticipate and provide for some change. (84-85)
Men remain constant in their behavior; Fortune is unpredictable. Nature often favors the daring and agressive - the young. (86-87)

Chapter XXVI: Free Italy!

The time is right for a ruler to unify Italy. Machiavelli calls on Lorenzo to be that leader, restating the things he must do to be an effective Prince. (87-90)

THE OLD STATE VS. THE NEW STATE:
SHAKESPEARE'S "MACBETH"

RATIONALE FOR TOPIC:

Shakespeare's tragedy offers wonderful insights into the nature of man. At the same time it is firmly rooted in the old concept of state, monarchy. In fact, Macbeth could have profited from reading Machiavelli's Prince since he does exactly those things which will bring about a ruler's downfall.

DESCRIPTION OF LEARNING ACTIVITY:

Students meet in the large group to view Roman Polanski's filmed version of "Macbeth." Then they meet in small discussion groups to discuss the play, draw inferences on the old idea of state which it reflects and discuss how Macbeth violates the rules Machiavelli lays down for ruling well. These activities help students develop competencies #1, 2, 3, 4, 7, 8, 13, 15, 17 & 18.

Time: 6 hours

READING ASSIGNMENT:

"The Tragedy of Macbeth" by William Shakespeare, the Folger Library: General Reader's Shakespeare, New York: Pocket Books, 1959.

This edition of "Macbeth" offers excellent introductions to the play, the author and Shakespearean theater. The format is easy to read since explanatory notes and scene summaries appear opposite the text.

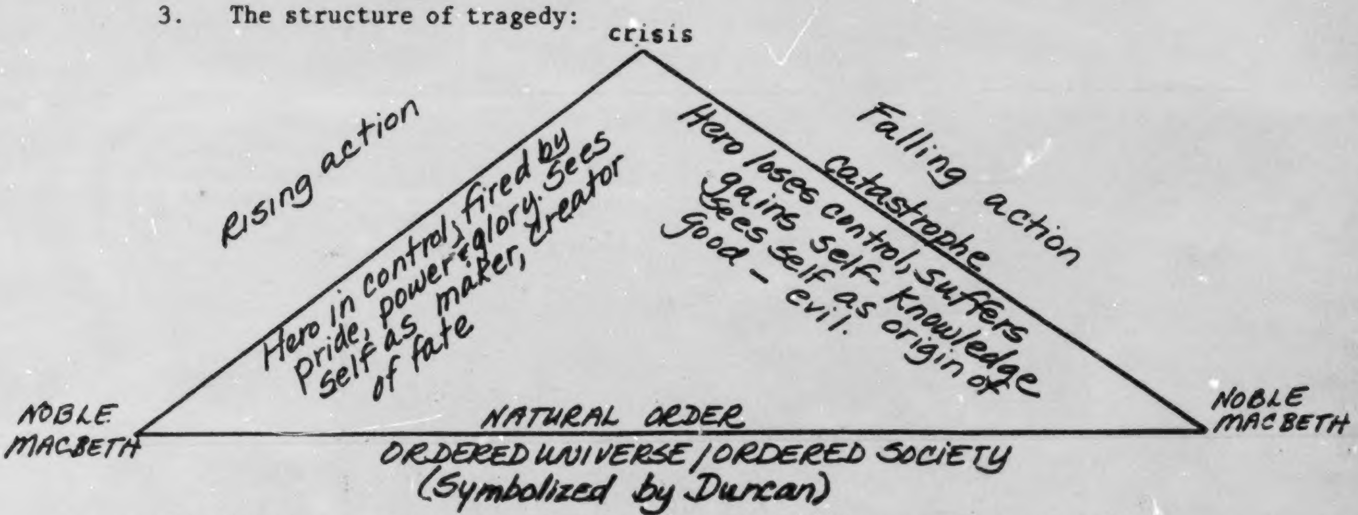
MAIN IDEAS STRESSED:

From the discussion:

1. Shakespeare's view of the world was that man was part of a divine order. Man had a dual nature--he could do evil, violate the order and create chaos, or he could do good and uphold the order. Macbeth disturbs the order of things because he refuses to uphold the king whom Shakespeare sees as the heart and mind of the state.

2. Shakespeare's view of kingship was influenced by Holinshed's Chronicles and by the Stuart myth of political power: it was the destiny of James I to be a good king.

3. The structure of tragedy:


crisis
Rising action
Hero in control, fired by pride, power & glory. Sees self as maker, creator of fate
Falling action
catastrophe
Hero loses control, suffers gains self-knowledge Sees self as origin of good - evil.
NOBLE MACBETH
NATURAL ORDER
NOBLE MACBETH
ORDERED UNIVERSE / ORDERED SOCIETY
(Symbolized by Duncan)

symbolized by Duncan at beginning returning from quelling uprising of traitors

Protagonist: promotes the struggle
Antagonist: works against the protagonist
Tragedy: protagonist through a flaw in nature comes to disaster

conflict of wills

Crisis: the moment when the hero loses control: Banquo's murder, ghost. From then on, events control him. His paranoia is answered by murder (He answers his paranoia with murder.)

Falling Action:
State disintegrates.
Murder of Macduff's family.
Out of control.
What happens to king is reflected in the state.
Falling back toward the natural order. Malcolm rules rightly. Natural order is re-established.

4. Macbeth violates Machiavelli's advice to a wise Prince, Macbeth:

- assumes a state easily won is easily held
- uses excessive cruelty
- neglects his defenses
- plunders subjects' property
- is irresolute
- believes conditions never change (fortune)
- does not maintain good will of people
- does not extinguish rival nobles
- does not guard against enemies
- does not gain allies
- is not prepared to go to war (among others!)

From the play:

1. The role of Fortune

Capt. Doubtful it stood,
As two spent swimmers that do cling together
And choke their art. The merciless Macdonwald

(Worthy to be a rebel, for to that
The multiplying villainies of nature
Do swarm upon him) from the Western Isles
Of kerns and gallowglasses is supplied;
And Fortune, on his damned quarrel smiling,
Showed like a rebel's whore. But all's too weak;
For brave Macbeth (well he deserves that name),
Disdaining Fortune, with his brandished steel,
Which smoked with bloody execution
(Like valor's minion), carved out his passage
Till he faced the slave;
Which ne'er shook hands nor bade farewell to him
Till he unseamed him from the nave to the chops
And fixed his head upon our battlements.
I.ii.

2. Opportunity for good or evil:

Ban. (Aside to Macbeth) That, trusted home,
Might yet enkindle you unto the crown,
Besides the Thane of Cawdor. But 'tis strange!
And oftentimes, to win us to our harm,
The instruments of darkness tell us truths,
Win us with honest trifles, to betray's
In deepest consequence--
Cousins, a word, I pray you.
I.ii.

3. Lady Macbeth plans and then encourages Macbeth to do evil:

Glamis thou art, and Cawdor, and shalt be
What thou art promised. Yet do I fear thy nature.
It is too full o' the milk of human kindness
To catch the nearest way. Thou wouldst be great;
Art not without ambition, but without
The illness should attend it. What thou wouldst highly,
That wouldst thou holily; wouldst not play false,
And yet wouldst wrongly win. Thou'ldst have, great
Glamis,
That which cries "Thus thou must do," if thou have it;
And that which rather thou dost fear to do
Than wishest should be undone. Hie thee hither,
That I may pour my spirits in thine ear
And chastise with the valor of my tongue
All that impedes thee from the golden round
Which fate and metaphysical aid doth seem
To have thee crowned withal.
I.v.

The raven himself is hoarse
That croaks the fatal entrance of Duncan
Under my battlements. Come, you spirits
That tend on mortal thoughts, unsex me here,
And fill me, from the crown to the toe, top-full

Of direst cruelty! Make thick my blood;
Stop up the access and passage to remorse,
That no compunctious visitings of nature
Shake my fell purpose nor keep peace between
The effect and it! Come to my woman's breasts
And take my milk for gall, you murd'ring ministers,
Wherever in your sightless substances
You wait on nature's mischief! Come, thick night,
And pall thee in the dunnest smoke of hell,
That my keen knife see not the wound it makes,
Nor heaven peep through the blanket of the dark
To cry "Hold, hold!"

I.v.

4. Macbeth's decision:

Macb. If it were done when 'tis done, then 'twere well
It were done quickly. If the assassination
Could trammel up the consequence, and catch,
With his surcease, success, that but this blow
Might be the be-all and the end-all here,
But here, upon this bank and shoal of time,
We'ld jump the life to come. But in these cases
We still have judgment here, that we but teach
Bloody instructions, which, being taught, return
To plague the inventor. This even-handed justice
Commends the ingredience of our poisoned chalice
To our own lips. He's here in double trust:
First, as I am his kinsman and his subject,
Strong both against the deed; then, as his host,

I.vii.

5. Macbeth's declaration on how he will hold his state:

To be thus is nothing,
But to be safely thus. Our fears in Banquo
Stick deep, and in his royalty of nature
Reigns that which would be feared. 'Tis much he dares,
And to that dauntless temper of his mind
He hath a wisdom that doth guide his valor
To act in safety. There is none but he
Whose being I do fear; and under him
My genius is rebuked, as it is said
Mark Antony's was by Caesar. He chid the Sisters
When first they put the name of King upon me,
And bade them speak to him. Then, prophet-like,
They hailed him father to a line of kings.
Upon my head they placed a fruitless crown
And put a barren scepter in my gripe,
Thence to be wrenched with an unlineal hand,
No son of mine succeeding. If't be so,
For Banquo's issue have I filed my mind;
For them the gracious Duncan have I murdered;

Put rancors in the vessel of my peace
Only for them, and mine eternal jewel
Given to the common enemy of man
To make them kings, the seed of Banquo kings!
III.i.

6. Macbeth's decision to use excess cruelty:

Macb. (Aside) Time, thou anticipat'st my dread exploits.
The flighty purpose never is o'ertook
Unless the deed go with it. From this moment
The very firstlings of my heart shall be
The firstlings of my hand. And even now,
To crown my thoughts with acts, be it thought and done!
The castle of Macduff I will surprise,
Seize upon Fife, give to the edge o' the sword
His wife, his babes, and all unfortunate souls
That trace him in his line. No boasting like a fool!
This deed I'll do before this purpose cool.
But no more sights!--Where are these gentlemen?
Come, bring me where they are.
IV.i.

7. Malcolm and Macduff discuss the state as a reflection of Macbeth's character:

Mal. Be not offended.
I speak not as in absolute fear of you.
I think our country sinks beneath the yoke;
It weeps, it bleeds, and each new day a gash
Is added to her wounds. I think withal
There would be hands uplifted in my right;
And here from gracious England have I offer
Of goodly thousands. But, for all this,
When I shall tread upon the tyrant's head
Or wear it on my sword, yet my poor country
Shall have more vices than it had before,
More suffer and more sundry ways than ever,
By him that shall succeed.
Macd. What should he be?
Mal. It is myself I mean; in whom I know
All the particulars of vice so grafted
That, when they shall be opened, black Macbeth
Will seem as pure as snow, and the poor state
Esteem him as a lamb, being compared
With my confineless harms.
Macd. Not in the legions
Of horrid hell can come a devil more damned
In evils to top Macbeth.
Mal. I grant him bloody,
Luxurious, avaricious, false, deceitful,
Sudden, malicious, smacking of every sin
That has a name.
IV.iii.

8. Macbeth's reaction to Lady Macbeth's death:

> Tomorrow, and tomorrow, and tomorrow
> Creeps in this petty pace from day to day
> To the last syllable of recorded time;
> And all our yesterdays have lighted fools
> The way to dusty death. Out, out, brief candle!
> Life's but a walking shadow, a poor player,
> That struts and frets his hour upon the stage
> And then is heard no more. It is a tale
> Told by an idiot, full of sound and fury,
> Signifying nothing.
>
> V.v.

9. Malcolm reflects how a good prince (king) should act:

> Before we reckon with your several loves
> And make us even with you. My Thanes and kinsmen,
> Henceforth be Earls, the first that ever Scotland
> In such an honor named. What's more to do
> Which would be planted newly with the time--
> As calling home our exiled friends abroad
> That fled the snares of watchful tyranny,
> Producing forth the cruel ministers
> Of this dead butcher and his fiendlike queen,
> Who (as 'tis thought) by self and violent hands
> Took off her life--this, and what needful else
> That calls upon us, by the grace of Grace
> We will perform in measure, time, and place.
> So thanks to all at once and to each one,
> Whom we invite to see us crowned at Scone.
>
> V.viii.

REACTIONS/SUGGESTIONS:

Students feel the movie really helps them better understand the play. Though many have studied the play before, examining it in light of ideas of state make it a refreshing change. No changes are planned.

THE OLD STATE VS. THE NEW:
VOLTAIRE'S CANDIDE

RATIONALE FOR TOPIC:

After the rigorous study of The Prince and the tragedy of "Macbeth", Candide provides necessary comic relief. A video-tape of "Candide" (Time-Life Films) is a marvelous staging of the work. Candide also provides a humorous look at the follies of 18th century Europe. It shows how far man has come from Machiavelli and Shakespeare. The monarchy is no longer a sacred rule. Subject to man's often irrational behavior, it's authority is now questioned. Examined rationally, it's mystery evaporates. Thinking men begin to look for other political institutions. At the end of Candide, Voltaire proposes his favorite, a community governed by a social contract--an idea he brought from England, borrowed from John Locke.

DESCRIPTION OF LEARNING ACTIVITY:

Students meet in the large group to view the video-tape of Candide. Then they meet in small groups to discuss the book. These activites help students develop competencies #1, 2, 3, 5, 7, 8, 13, 15, 17 & 18.
Time: 3 hours

READING ASSIGNMENT:

Candide by Voltaire, translated by Lowell Blair, New York: Bantam Books, 1959.

MAIN IDEAS STRESSED:

1. The definition and nature of satire:

> Satire is: the ridiculing of folly, stupidity, or vice; the use of irony, sarcasm, or ridicule for exposing or denouncing the frailties and faults of mankind. Satire is a literary manner, or technique, that blends humor and wit with a critical attitude toward human activities and institutions. Satire is a general term, one usually considered to involve both moral judgment and a desire to help improve a custom, belief, or tradition.

* * * *

> The true satirist is conscious of the frailty of institutions of man's devising and attempts through laughter not so much to tear down as to inspire a remodeling.

* * * *

> *Satire* is fundamentally of two types, named for their most distinguished classical practitioners: *Horatian satire* is gentle, urban, smiling; it aims to correct by gentle and broadly sympathetic laughter; *Juvenalian satire* is biting, bitter, angry; it points with contempt and moral indignation to the corruption and evil of man and institutions.
>
> From: C. Hugh Holman, *A Handbook To Literature*, (New York: The Bobbs-Merrill Company, 1972), pp. 473, 472.

2. Students develop two lists. One list is for things Voltaire satirizes. The second list is for things he doesn't satirize. (Students do not find anything to put in the second list.)

3. The nature of the state in Eldorado is discussed in light of man's inherent goodness and the concept of the noble savage. Why European man could not live in that state is also discussed.

4. The society Candide forms at the end of the book is discussed as well as the significance of the famous last line, "...but we must cultivate our garden."

REACTIONS/SUGGESTIONS:

The video-tape of *Candide* is always well-received. Previously only part of this tape was shown and then a brief discussion was held of *Candide*. Currently students benefited from viewing the entire tape and allowing more discussion time. Students love *Candide*!

THE OLD STATE VS. THE NEW STATE:
JOHN LOCKE'S SECOND TREATISE

RATIONALE FOR TOPIC:

The influence of John Locke's treatises on government was immediately felt by men as diverse politically as Voltaire and Thomas Jefferson. Locke's ideas became a keystone in the American democratic system. Locke's second treatise, "An Essay Concerning the True Original Extent and End of Civil Government," sets forth in clear prose this important theory.

DESCRIPTION OF LEARNING ACTIVITY:

Students meet in small discussion groups to determine Locke's concept of human nature and the government he saw arising from that nature and to compare Locke's concept of state (new) to Machiavelli's (old). These activities help students develop competencies #1, 2, 3, 4, 5, 6, 7, 8, 9, 13, 15, 16, 17 & 18.
Time: 3 hours

READING ASSIGNMENT:

Introduction to John Locke from George K. Anderson and Robert Warmock, eds., Tradition and Revolt, Glenview, Illinois: Scott, Foresman and Company, 1967, p. 51.
(Excerpts from "An Essay Concerning the True Original Extent and End of Civil Government," from Book Three of The World In Literature edited by George K. Anderson and Robert Warnock, Glenview, Ill.: Scott, Foresman and Company, 1967, pp. 51-58.

These excerpts reveal Locke's belief that man in his original, natural state was good, free and equal; that he entered into a social contract with other men thus forming the first government; and that all government derives it's right to rule from the consent of the governed.

MAIN IDEAS STRESSED:

1. The state of nature:

> To understand political power aright, and derive it from its original, we must consider what estate all men are naturally in, and that is, a state of perfect freedom to order their actions, and dispose of their possessions and persons as they think fit, within the bounds of the law of Nature, without asking leave or depending upon the will of any other man. (235)
>
> A state also of equality, wherein all power and jurisdiction is reciprocal, no one having more than another, there being nothing more evident than that creatures of the same species and rank, promiscuously born to all the same advantages of Nature, and the use of the same faculties, should also be equal one amongst another, without subordination or subjection... (235)

> But though this be a state of liberty, yet it is not a state of licence;... The state of Nature has a law of Nature to govern it, which obliges every one, and reason, which is that law, teaches all mankind who will but consult it, that being all equal and independent, no one ought to harm another in his life, health, liberty or possessions... (235)

2. Property:

> Though the earth and all inferior creatures be common to all men, yet every man has a "property" in his own "person." This nobody has any right to but himself. The "labour" of his body and the "work" of his hands, we may say, are properly his. Whatsoever, then, he removes out of the state that Nature hath provided and left it in, he hath mixed his labour with it, and joined to it something that is his own, and thereby makes it his property. (237)
>
> The same law of Nature that does by this means give us property, does also bound that property too. "God has given us all things richly." Is the voice of reason confirmed by inspiration? But how far has He given it us--"to enjoy"? As much as any one can make use of to any advantage of life before it spoils, so much he may by his labour fix a property in. Whatever is beyond this is more than his share, and belongs to others. Nothing was made by God for man to spoil or destroy. (238)
>
> ...Now of those good things which Nature hath provided in common, every one hath a right (as hath been said) to as much as he could use, and has a property in all he could effect with his labour... (238-239)
>
> If he gave away a part to anybody else, so that it perished not uselessly in his possession, these he also made use of. And if he also bartered away plums that would have rotted in a week, for nuts that would last good for his eating a whole year, he did no injury; he wasted not the common stock; destroyed no part of the portion of goods that belonged to others, so long as nothing perished uselessly in his hands. (239)
>
> And thus came in the use of money; some lasting thing that men might keep without spoiling, and that, by mutual consent, men would take in exchange for the truly useful but perishable supports of life. (239)

3. The beginning of political institutions:

> Men being, as has been said, by nature all free, equal, and independent, no one can be put out of this estate and subjected to the political power of another without his own consent, which is done by agreeing with other men, to join and unite into a community for their comfortable, safe, and peaceable living, one amongst another, in a secure enjoyment of their properties, and a greater security against any that are not of it. (240)
>
> For, when any number of men have, by the consent of every individual, made a community, they have thereby made that community one body, with a power to act as one body, which is only by the will and determination of the majority. For that which acts any community, being only the consent of the individuals of it, and it being one body, must move one way, it is necessary the body should move that way whither the greater force carries it, which is the consent of the majority, or else it is impossible it should act or continue one body, one community... (240)

4. The purpose of political institutions:

> If man in the state of Nature be so free as has been said, if he be absolute lord of his own person and possessions, equal to the greatest and subject to nobody, why will he part with his freedom, this empire, and subject himself to the dominion and control of any other power? To which it is obvious to answer, that though in the state of Nature he hath such a right, yet the enjoyment of it is very uncertain and constantly exposed to the invasion of others; for all being kings as much as he, every man his equal, and the greater part no strict observers of equity and justice, the enjoyment of the property he has in this state is very unsafe, very insecure. This makes him willing to quit this condition which, however free, is full of fears and continual dangers; and it is not without reason that he seeks out and is willing to join in society with others who are already united, or have a mind to unite for the mutual preservation of their lives, liberties and estates, which I call by the general name--property. (241)
>
> But though men when they enter into society give up the equality, liberty, and executive power they had in the state of Nature into the hands of the society, to be so far disposed of by the legislative as the good of the society shall require, yet it being only with an intention in every one the better to preserve himself, his liberty and property (for no rational

> creature can be supposed to change his condition with an intention to be worse), the power of the society or legislative constituted by them can never be supposed to extend farther than the common good, but is obliged to secure every one's property by providing against those three defects above mentioned that made the state of Nature so unsafe and uneasy. And so, whoever has the legislative or supreme power of any commonwealth, is bound to govern by established standing laws, promulgated and known to the people, and not by extemporary decrees, by indifferent and upright judges, who are to decide controversies by those laws; and to employ the force of the community at home only in the execution of such laws, or abroad to prevent or redress foreign injuries and secure the community from inroads and invasion. And all this to be directed to no other end but the peace, safety, and public good of the people. (243-244)

REACTIONS/SUGGESTIONS:

Students enjoy reading John Locke's essay. Ample time is allowed for discussion. No changes are planned.

UNIT V: SCIENCE CREATES A NEW WORLD VIEW

DESCRIPTION OF THE UNIT:

The rebirth of natural philosophy in the Renaissance opened the door to the rational examination of natural phenomena. The early work done by Copernicus, Kepler and Galileo is crowned by the emergence of the scientific method and Newtonian mechanics. During this unit, students examine the contributions of Renę Descartes and Francis Bacon to the birth of the modern scientific method and study carefully Newton's three laws of motion and the law of gravity.

The unit is divided into three parts: lecture on and discussion of Renę Descartes, lecture on and discussion of Francis Bacon and lecture on, discussion of and demonstrations of Newtonian mechanics.

Although this is a short unit, it is an important one because it caps the age of inquiry begun in the Renaissance and lays the foundation for the age of rationalism which will follow in the 18th century and the scientific determinism of the 19th and 20th centuries. Thus, the unit bridges the gap between Semesters II and III.
Time: 12 hours

OBJECTIVES:

1. To examine the birth of the modern scientific method; to understand its parts and origin.

3. To understand the contributions of Renę Descartes, Francis Bacon and Isaac Newton to the modern scientific method (as well as Copernicus, Kepler and Galileo).

3. To learn about Newtonian mechanics and to see them as the culmination of Renaissance science and the foundation of classical mechanics.

4. To understand the emergence of a new world view in which faith in science replaces faith in God.

5. To continue developing student's skills at essay writing.

6. To see Newtonian mechanics as the basis of the Industrial Revolution.

7. To learn to read and interpret scientific literature.

CONTENT:

"The Creative Process In Science," IDS Staff
"Introduction: Renę Descartes"
"II & IV from Discourse on Method" by Renę Descartes
"Sir Francis Bacon" Excerpts from Novum Organum by Francis Bacon
"Perspectives: Newtonian Synthesis"
"Newton's Preface to the First Edition of Principia Mathematica"
Excerpts from Principia Mathematica
"Newton's Science"
"The World As Clockwork Mechanism"

COMPETENCIES DEVELOPED:

#1, 2, 3, 4, 5, 6, 8, 9, 10, 11, 13, 15, 16, 17 & 18.

TESTING/EVALUATION:

An in-class essay exam is given covering this unit. At the beginning of the unit, students are given the topic, "The formation of the modern scientific method," and an outline (below) to help them organize their ideas.

I. Introduction: The Modern Scientific Method
  A. Enumeration of elements in the method
  B. Explanation of each element in the method
    1. Element #1
      a. definition/explanation
      b. role in method
    2. Element #2
      a. definition/explanation
      b. role in method
    3. Element #3
      a. definition/explanation
      b. role in method
    4. Element #4
      a. definition/explanation
      b. role in method

II. Body: René Descartes
  A. Introduction to Descartes and his work
  B. Descartes' discoveries
    1. Discovery #1
      a. explanation
      b. significance
    2. Discovery #2
      a. explanation
      b. significance
    3 & 4 if needed; same as above
  C. Descartes' method
  D. Importance of B & C to the development of the modern scientific method

III. Body: Francis Bacon
  A. Introduction to Bacon and his work
  B. Bacon's method
  C. Bacon's attitude/mind-set
  D. Importance of Bacon's method and mind-set to the modern scientific method

IV. Body: Isaac Newton
  A. Introduction to Newton and the Principia
  B. Newton's discoveries
    1. Discovery #1
      a. explanation
      b. significance

        2. Discovery #2
            a. explanation
            b. significance
        3 & 4 as needed; same as above
    C. Newton's method
    D. Importance of Newton's discoveries and method to the modern scientific method

V. Conclusion: Summary
    A. Restated definition of the modern scientific method
    B. Re-iteration of the contribution of Descartes, Bacon and Newton to this method

REACTIONS/SUGGESTIONS:

It is important to have the full 12 hours to cover this unit well. It is erroneous to try and cut it short.

SCIENCE CREATES A NEW WORLD VIEW:
RENĘ DESCARTES

RATIONALE FOR TOPIC:

> Descartes' outstanding contribution to thought is that from which we began: the introduction into science of the ruthless methods of doubt and of mathematics. His second contribution, however, was a kind of rationalism--of logically deriving effects from causes--which has had great influence and has remained essentially the French way of thinking on all problems.
>
> --Bronowski & Mazlish, The Western Intellectual Tradition

Descartes is always popular with students. His prose is clear and precise and has a modern ring to it--maybe because we've learned to think his way. Yet it is his logic which captures students minds. His ability to mount a seemingly uncontestable logical argument satisfies their desire for absolutes and also teaches them the value of doubt.

DESCRIPTION OF LEARNING ACTIVITY:

Students meet in small groups to discuss Descartes' philosophical discoveries and in the large group to learn about his mathematical discoveries. These activities help students develop competencies #1, 2, 3, 4, 5, 6, 8, 9, 10, 11, 13, 15, 16, 17 & 18.
Time: 3 hours

READING ASSIGNMENT:

"Introduction: Renę Descartes" from The Western Intellectual Tradition by J. Bronowski and Bruce Mazlish, New York: Harper and Row, Publishers, 1960, pp. 216-229.

This is a brief overview of Descartes' life, times and important ideas.

"Discourse on Method: II and IV" by Renę Descartes from Robert F. Davidson, The Search for Meaning in Life, New York: Holt, Rinehart and Winston, 1967, pp. 116-121.

In II, Descartes explains how he arrived at the method now called "Cartesian doubt" and explains this method. In IV he shows how employing this method led to his famous discovery, cogito ergo sum.

MAIN IDEAS STRESSED:

1. Descartes discoveries:

    a. Mathematics was the unequivocal language for describing the universe. (250)

    b. The vortex theory - the first fundamental and comprehensive view of the universe different from the traditional Aristotelian/Christian view thus opening the way for even more precise mechanical theories. (251)

c. A deductive method for thinking clearly drawn from Euclidean geometry and employing "Cartesian doubt" (de omnibus dubitandum). (253-54)

d. That both algebra and geometry were branches of mathematics; that the formulas of algebra described and could be applied to geometric figures.

e. The Cartesian system of co-ordinates.

2. Passages emphasized:

The influence of mathematics:

> . . . mathematicians alone have been able to find some demonstrations, some certain and evident reasons, I had no doubt that I should begin where they did, although I expected no advantage except to accustom my mind to work with truths and not to be satisfied with bad reasoning. In this I trust that I shall not appear too vain, considering that there is only one true solution to a given problem, and whoever finds it knows all that anyone can know about it. (254)

Descartes starting point:

> But I had observed that all the basic principles of the sciences were taken from philosophy, which itself had no certain ones. It therefore seemed that I should first attempt to establish philosophic principles, and that since this was the most important thing in the world and the place where haste and prejudice were most to be feared, I should not attempt to reach conclusions until I had attained a much more mature age than my then twenty three years, and had spent much time in preparing for it. This preparation could consist partly in freeing my mind from the false opinions which I had previously acquired, partly in building up a fund of experiences which should serve afterwards as the raw material of my reasoning, and partly in training myself in the method which I had determined upon, so that I should become more and more adept, in its use. (255)

Cogito ergo sum:

> Since this truth, I think, therefore I am, was so firm and assured that all the most extravagent suppositions of the sceptics were unable to shake it, I judged that I could accept it without hesitation as the first principle of the philosophy I was seeking. (255)

Doubt leads to the existence of God:

> After that I reflected upon the fact that I doubted, and that, in consequence, my spirit was not wholly perfect, for I saw clearly that it was a greater perfection to know than to doubt. I decided to ascertain from what source I had learned to think of something more perfect than myself, and it appeared evidently that it must have been from some nature which was really more perfect. . . To derive it from nothingness was manifestly impossible. . . Thus the only hypothesis left was that this idea was put in my mind by a nature that was really more perfect than I was. . . it followed of necessity that there was someone else more perfect upon whom I depended and from whom I had acquired all that I possessed. (256-57)

3. Descartes contribution to the scientific method:

    a. creation of an exact method based on process used in mathematics and geometry.

    b. custom and tradition can affect the way we perceive truth, therefore they must be set aside.

    c. mind can arrive at certainties in the absence of external evidence (inportant in formation of hypotheses).

    d. constructing a system or model from the smallest number of principles (laws, theorems). (Copernicus also did this.)

    e. explanation of physical world and analysis of mental process in terms of cause and effect.

REACTION/SUGGESTIONS:

No changes planned.

SCIENCE CREATES A NEW WORLD VIEW:
FRANCIS BACON

RATIONALE FOR TOPIC:

> . . . he thought of himself as a philosopher and aspired to review and renew all the sciences in the manner of Aristotle. Perhaps his greatest service to Western culture lay in articulating a scientific method and bridging the gap between Renaissance scientists and modern science.
>
> Anderson and Warnock
> The World in Literature

Francis Bacon represents the contribution of induction and scientific observation to the scientific method made by the English empiricists. He provides the foundation on which modern scientists have built the method of experimentation by which hypotheses are validated.

DESCRIPTION OF LEARNING ACTIVITY:

Students meet in small groups to discuss Bacon's philosophy and his contribution to the scientific method. This activity helps students master competencies #1, 2, 3, 4, 5, 6, 13, 15, 16, 17 & 18.
Time: 3 hours

READING ASSIGNMENT:

"Sir Francis Bacon" and excerpts from Novum Organum by Sir Francis Bacon from Book Three of The World in Literature by George K. Anderson and Robert Warnock, Glenview, Ill.: Scott, Foresman and Company, 1967, pp. II: 506 - II: 508.

In the excerpts, Bacon proposes approaching nature and gathering facts about nature through a new method (organon) which would divorce science from superstition, theology and prior philosophy.

MAIN IDEAS STRESSED:

1. From Novum Organum:

> Man, being the servant and interpreter of Nature, can do and understand so much and so much only as he has observed in fact or in thought of the course of nature: beyond this he neither knows anything nor can do anything. (261)
>
> In sciences founded on opinions and dogmas, the use of anticipations and logic is good; for in them the object is to command assent to the proposition, not to master the thing. (262)
>
> The honour of the ancient authors, and indeed of all, remains untouched; since the comparison I

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challenge is not of wits or faculties, but of ways and methods, and the part I take upon myself is not that of a judge, but of a guide. (262)

The doctrine of those who have denied that certainty could be attained at all, has some agreement with my way of proceeding at the first setting out; but they end in being infinitely separated and opposed. For the holders of that doctrine assert simply that nothing can be known; I also assert that not much can be known in nature by the way which is now in use. But then they go on to destroy the authority of the senses and understanding; whereas I proceed to devise and supply helps for the same. (262)

There are four classes of Idols which beset men's minds. To these for distinction's sake I have assigned names,--calling the first class _Idols of the Tribe_; the second, _Idols of the Cave_; the third, _Idols of the Market-place_; the fourth, _Idols of the Theatre_.... (263)

* * * *

The understanding must not however be allowed to jump and fly from particulars to remote axioms and of almost the highest generality (such as the first principles, as they are called, of arts and things), and taking stand upon them as truths that cannot be shaken, proceed to prove and frame the middle axioms by reference to them; which has been the practice hitherto; the understanding being not only carried that way by a natural impulse, but also by the use of syllogistic demonstration trained and inured to it. But then, and then only, may we hope well of the sciences, when in a just scale of ascent, and by successive steps not interrupted or broken, we rise from particulars to lesser axioms; and then to middle axioms, one above the other; and last of all to the most general. For the lowest axioms differ but slightly from bare experience, while the highest and most general (which we now have) are notional and abstract and without solidity. But the middle are the true and solid and living axioms, on which depend the affairs and fortunes of men; and above them again, last of all, those which indeed the most general; such I mean as are not abstract, but of which those intermediate axioms are really limitations.

The understanding must not therefore be supplied with wings, but rather hung with weights, to keep it from leaping and flying. Now this has never yet been done; when it is done, we may entertain better hopes of the sciences. (267-68)

2. Bacon's contributions to the scientific method:

   a. empirical observation of relevant factors

   b. use of inductive reasoning

   c. necessity of cleansing the mind of prejudices (idols)

   d. rejection of the authority of tradition

REACTION/SUGGESTIONS:

Topic went well. No changes are planned.

SCIENCE CREATES A NEW WORLD VIEW:
ISAAC NEWTON

RATIONALE FOR TOPIC:

> "No one must think that Newton's great creation can be overthrown by Relativity or any other theory. His clear and wide ideas will forever retain their significance as the foundation on which our modern conceptions of physics have been built."
>
> Albert Einstein

Isaac Newton is the foundation of our modern world. On his physics rests the industrial society because his union of mechanics with mathematics and natural philosophy made applied science possible. Moreover, the world view which was derived from his discoveries has dominated the world ever since.

DESCRIPTION OF LEARNING ACTIVITY:

Students meet in the large group for lecture/discussion and demonstrations of Newton's work. This activity helps students develop competencies #1, 2, 3, 4, 5, 6, 8, 9, 10, 11, 13, 15, 16, 17 & 18.
Time: 6 hours

READING ASSIGNMENT:

"Perspectives: Newtonian Synthesis"

This is a short biography of Newton.

Excerpts from Principia Mathematica by Isaac Newton. "Preface to the First Edition." "General Scholium." "Scholium."

In these excerpts Newton sets forth the purpose of the Principia, his assumptions about the nature of reality and his laws of motion.

"Newton's Science" from Physics, The Fabric of Reality by S.K. Kim, New York, New York: MacMillan Publishing Co., Inc., 1975, pp. 120, 121, 123-127.

This is a clear explanation of Newton's three laws of motion and the law of gravity.

MAIN IDEAS STRESSED:

1. The purpose of the Principia from the "Preface":

> But I consider philosophy rather than arts and write not concerning manual but natural powers, and consider chiefly those things which relate to gravity, levity, elastic force, the resistance of fluids, and the like forces, whether attractive or impulsive; and therefore I offer this work as the mathematical principles of

> philosophy, for the whole burden of philosophy seems to consist in this--from the phenomena of motions to investigate the forces of nature, and then from these forces to demonstrate the other phenomena; and to this end the general propositions in the first and second Books are directed. In the third Book I give an example of this in the explication of the System of the World; for by the propositions mathematically demonstrated in the former Books, in the third I derive from the celestial phenomena the forces of gravity with which bodies tend to the sun and the several planets. Then from these forces, by other propositions which are also mathematical, I deduce the motions of the planets, the comets, the moon, and the sea. I wish we could derive the rest of the phenommena of Nature by the same kind of reasoning from mechanical principles, for I am induced by many reasons to suspect that they may all depend upon certain forces by which the particles of bodies by some causes hitherto unknown are either mutually impelled towards one another, and cohere in regular figures, or are repelled and recede from one another. These forces being unknown, philosophers have hitherto attempted the search of Nature in vain; but I hope the principles here laid down will afford some light either to this or some truer method of philosophy. (273-74)

2. Newton's philosophical ideas-particularly about the nature of God ("General Scholium")--show how he is still tied to a religious view even though those who follow him will ignore his beliefs in favor of believing his laws.

> This most beautiful system of the sun, planets, and comets, could only proceed from the counsel and dominion of an intelligent and powerful Being. And if the fixed stars are the centres of other like systems, these, being formed by the like wise counsel, must be all subject to the dominion of One.... (275)

> ...the true God is a living, intelligent, and powerful Being; and, from his other perfections, that he is supreme, or most perfect. He is eternal and infinite, omnipotent and omniscient; that is, his duration reaches from eternity to eternity; his presence from infinity to infinity; he governs all things, and knows all things that are or can be done. (276)

> We have ideas of his attributes, but what the real substance of anything is we know not. In bodies, we see only their figures and colors, we hear only the sounds, we touch only their outward surfaces, we smell only the smells, and taste the savors; but their inward substances are not to be known either by our senses, or by any reflex act of our minds:

354-355

> much less, then, have we any idea of the substance of God. We know him only by his most wise and excellent contrivances of things, and final causes; we admire him for his perfections; but we reverence and adore him on account of his dominion: for we adore him as his servants; and a god without dominion, providence, and final causes, is nothing else but Fate and Nature. (276-77)
>
> Hitherto we have explained the phenomena of the heavens and of our sea by the power of gravity, but have not yet assigned the cause of this power. This is certain, that it must proceed from a cause that penetrates to the very centres of the sun and planets, without suffering the least diminution of its force; (277)
>
> ...But hitherto I have not been able to discover the cause of those properties of gravity from phenomena, and I frame no hypotheses; for whatever is not deduced from the phenomena is to be called an hypothesis; and hypotheses, whether metaphysical or physical, whether of occult qualities or mechanical, have no place in experimental philosophy. In this philosophy particular propositions are inferred from the phenomena, and afterwards rendered general by induction. Thus it was that the impenetrability, the mobility, and the impulsive force of bodies, and the laws of motion and of gravitation, were discovered. And to us it is enough that gravity does really exist, and act according to the laws which we have explained, and abundantly serves to account for all the motions of the celestial bodies, and of our sea. (277-78)

3. Newton defines the elements of physics with which he deals in the Scholium. These elements are: mass, space and time. Newton notes that these are somewhat evident to the senses in their relative form (or are derived from our sense experiences).
    a. Mass (matter or substance)
        1a. occupies space.
        2a. has inertia & density.
        3a. is discontinuous in space.
    b. Space
        1b. three-dimensional, a volume expressed in terms of the Cartesian co-ordinates.
        2b. there is a universe of infinite spatial extension in all directions (absolute space) to which our space is relative.
        3b. there is void where there is space but no matter.
    c. Time
        1c. time is the order of events (phenomena).
        2c. absolute time flows equitably through all systems.
        3c. relative time is symbolized by the clock.

4. Newton's three Laws of Motion are significant because they have universal application. They can be applied to any mass.
    - a. Newton's 1st Law of Motion:
      "A body at rest or in uniform motion will remain at rest or in uniform motion unless some external force is applied to it."
        - 1a. force--a push or pull.
        - 2a. demonstration of force of gravity balanced by upward force up.
        - 3a. demonstration of uniform motion.
        - 4a. inertia: inherent property of a body to remain at rest or in uniform motion.
        - 5a. demonstration of inertia using an air track.
    - b. Newton's 2nd Law of Motion:
      "When a body is acted upon by a constant force, its resulting acceleration is proportional to the Force and inversely proportional to Mass. $\underline{F = ma}$"
        - 1b. acceleration is a change in speed (not same as velocity).
        - 2b. demonstration with weights thrown into the air.
        - 3b. discussion of application to spaceshuttle, Columbia.
        - 4b. discussion of inverse proportion:
          $\frac{\text{Force}}{\text{Mass}} = \text{acceleration}$
        - 5b. various forms of acceleration:
          circular acceleration or rotational motion = force along radius of a circle.
        - 6b. demonstration: student on a pedestal--arms extended.
        - 7b. demonstration of the transfer of momentum.
    - c. Newton's 3rd Law of Motion:
      "To every action force there is equal and opposite reaction force." Example: If a person jumps off a building, the forces are equal. However, one mass is greater, one is accelerated.

5. Newton discovered the first universal force--gravity.
    - a. "every body in the universe attracts every other body (in the universe) with a force that is proportional to the product of the masses and inversely proportional to the square of the distance between their centers.

$$F \qquad \frac{M_i \; M_2}{d2}$$

$$F = G \frac{M_i \; M_2}{d^2}$$

G: the constant of Universal Gravitation

    - b. visual demonstration of inverse square law.

6. For Newton, the derivation of Kepler's third law from his own laws validated those laws. In addition, Galileo's idea on velocity was confirmed by Newton's law.

7. Newton said, "If I have seen further it is because I have stood on the shoulders of giants." This testifies to his recognition of the contributions of Kepler and Galileo to his work and demonstrates the building process of science.

8. Today scientists continue to re-test Newton's laws as Newton himself did.

9. Newton's influence:

> The impact of Newtonian mechanics went far beyond just changing scientific attitudes. Within five years of its appearance, Newton's work was publicly referred to from an English pulpit as "incontestably sound." And it was the godparent to the whole Age of Enlightenment. (293)
>
> With the word "nature" there came the impact of the mechanistic doctrine of "natural" law. Newton's science inspired Thomas Jefferson to say that under the laws of nature a broken contract authorized the Americans to rebel against King George III. Jean Jacques Rousseau felt that the "state of nature" of the "noble savage" was a state of virtue. Jeremy Bentham was inspired to identify utility or the "greatest happiness" principle as the social law of gravity in legislation. Adam Smith talked about economics in a Newtonian way: in a supply-and-demand market the actual prices tend to "gravitate" toward the natural price. In politics the rationalists tried to use the "contrary-to-nature" argument to replace the old institutions of Europe with an enlightened "natural" humanitarianism; and the authority of Newton's system lent power to their attempts. Rationalism reigned supreme; Hume was willing to believe in a miracle only if the falsehood of the testimony for the miracle was even harder to accept than the miracle itself. (293)
> Newton solved the puzzle of nature so well that the world never was the same after him. His mechanics led to the clockwork model of the universe; the concepts coming out of this model included: a natural religion, a natural government, and a natural economy. Even the American Revolution was based on these natural concepts, on the inalienable rights of man; the United States is a result of this Newtonianism, of this rationalism. In fact, for a whole century all of intellectual society was dominated by ideas derived from the Newtonian mechanics. For a whole century the scientific culture reigned supreme.

> There were attempts to place other disciplines, like philosophy and politics, on a similar basis of quantitative law, to put them into a scientific form aiming toward universal agreement. These attempts at a scientific consensus outside science were magnificent, but inevitable failures. And their excesses provoked the revolution of the resurgent humanistic culture in Romanticism. (296-97)

REACTION/SUGGESTIONS:

The demonstrations of each law are particularly effective. No changes are proposed.

APPENDIX

Student Papers
from the
Interdisciplinary Studies Program

The following student papers represent the type and variety of evaluations that students are required to do in the Interdisciplinary Studies Program.

The introduction to Part I of the teacher's guide contains the compentencies that are stressed in this program and these competencies are marked in the student papers.

The first nine competencies are basic to clear writing and understanding and are emphasized in almost every activity in this program. As the program moves into Semester II, III, and IV, the level of difficulty is increased, therefore only those competencies that present something new or more difficult will be marked in those papers.

Page numbers in some parts of this manual are cross-referenced to the first edition of the Valencia Community College texts rather than the current edition of these texts.

Competencies Developed:
1,2,3,5,7,8,9,13,14,15,17,18

IDS II
UNIT I
STUDENT PAPER

A THEOLOGICAL WORLD VIEW

During the Medieval period of European history (circa 400-1300 A.D.), an idea of a Theological World View emerged. A pattern arose in which people organized their world view through their faith in God. They believed in a creator (or God) to whom they attributed the qualities of omniscience, omnipotence, and omnipresence. The idea of a creator led to the assumption of a created universe in which they live. These ideas formed the framework for their world view. In a theological world view, an important distinction is drawn between reason and faith, and between finite and infinite. These paradoxes are of great importance in the writings of this period and give us an insight into the Theological World View. The Story of Job and the writings of Jesus, (The Sermon on The Mount), the prophet Paul, and St. Augustine aid us in understanding this Theological World View of the Middle Ages.

Ideas in religion reflect a theological cosmology. Cosmology is an individual or collective idea about what constitutes the universe. A theological cosmology goes beyond scientific reasoning. It assumes that an entity is the creator and the governing principal of the cosmology.

A created universe is present because of a creator. This universe contains all. It is total and infinite, therefore the creator must have the attributes of omnipotence, omnipresence and omniscience.

Omnipotence (all power) implies that all of the forces of the physical universe are encompassed in the whole and no power or force can be exerted as a reality separate from the whole. Omnipresence (all presence) implies that there is no part of the universe that is not contained in the origin. No object or person can be isolated apart from the whole. Omniscience (all knowledge) implies that no knowledge or thought exists outside the infinite knowledge of the origin or creator. 5

7 As the theological cosmology is contemplated, our thoughts lead us to paradoxes. (A paradox is a seemingly contradictory statement which may none the less be true). Two great paradoxes to be encountered in religion are finite/infinite and reason/faith.

Through my senses I perceive I have a body, that I consist of matter, and that I have a physical reality. I am convinced of the reality of matter, yet I know that it is not all of reality. It is finite or limited. I can think of the infinite possibilities of all which are beyond my finite nature.

Through my reason I am able to perceive my physical reality. I think about sensory information, draw conclusions and thereby acquire knowledge about the world. I perceive myself in the act of perception.

Yet I do not understand the vast universe in which I am a part for the reason that I cannot understand myself. Faith is a personal commitment to a belief in the universal creator or origin that is beyond the scope of reason. Reason demands proof and faith demands commitment.

The attempt to address these paradoxes, forms the core of all religious thought, in particular these paradoxes as addressed by Jesus in "The Sermon on The Mount" and give us an insight into the Theological World View of the Middle Ages.

Not only are the ideals of faith demonstrated in the writings of the time, but faith is also prevalent in the music and art. The music and art of the time reignited the fires of faith in those who were illiterate-the majority of the people. The art and music reinforce the ideas of faith. Art does so by picturing martyrs and music does so by its intensity and calmness to the ear. Music and art go hand in hand to reinforce faith and act as a bridge to bring revealed knowledge, prophetic knowledge to those who are not able to read the writings of the time. 7

THE SERMON ON THE MOUNT

The coming of Jesus brings to the Theological World View the idea of salvation-man can die, have sins forgiven and go to heaven-man can be redeemed. Jesus presents a new deminsion in that finite man can be redeemed, as Jesus demonstrated redemption. This idea of an eternal life causes man to prepare somewhat in this life as a transition to the next life in heaven. The Sermon on The Mount, is an oracle given by Jesus Christ to his disciples. In the oracle, Jesus reaffirms the ideas of a divine plan by the infinite God and introduces the idea of redemption to a finite human. From The Sermon on The Mount, "Blessed are you when man revile you and persecute you... on my account. Rejoice...for your reward is great in heaven, for so men persecuted the prophets who were before you." Here Jesus stresses the value of faith in God as opposed to reason and faith that will be rewarded in heaven. Jesus reaffirmed to the people that the value and purpose of the law, the 10 commandments-is still there. "Think not that I have come to abolish the law and the prophets, I have come not to abolish them, but to fulfill them." Here Jesus reaffirms the value of the writings of the infinite creator to the finite man. The idea is raised that God has infinite forgivenness and the model should be God-forgiving merciful, just-infinite rather than man (finite.)

This ability to model comes through faith rather than reason and this strength must come from the heart not just by a false following of the letter of the law. Jesus said "You shall love your neighbor and hate your enemy. But I say to you, love your enemies and pray for those that prosecute you so that you may be sons of your father who is in heaven." There once again the idea of the infinite plan is revealed and the idea of faith and following God's Word rather than man's reasoning is reaffirmed. 3

THE CITY OF GOD

The book "The City of God" by Augustine was written as the Roman Empire was declining. Augustine wrote the book as a defense of the ideals of Christianity and in it he expressed the view that the Roman Empire was not as important as the growth of a 'heavenly city'- in other words the spiritual progress of mankind. The vehicle for this progress was of course to be the Church. According to Augustine, human beings are unable to attain salvation solely through their efforts and good works. The grace of God is necessary for salvation. In "The City of God", Augustine wrote, "On the basic differences between the earthly and heavenly city, the grace of God saves some men from the Kingdom of death for the heavenly city." Augustine maintained that God already knows who will be saved and who will not. This affirms into the Theological World View the idea that the infinite God has a predetermined plan for the finite man, and that although man is finite in his ability to understand this divine plan, man can understand that he is a part of this plan. Augustine suggests a paradox between reason and faith. From the 'City of God' Augustine wrote, "The citizens of the city of God live according to the spirit, i.e. according to God; the others according to the flesh, i.e. according to man...The difference between living according to the flesh (reason) and according to the spirit (faith) is the difference between a good will (a will continually turned to God) and a bad will (a will turned to man.) Here Augustine illustrates the idea of two cities-that man can aspire to God's City and be closer to the infinite God by maintaining faith, (a good will)-and although God has predestined some men, man is assured he may not enter the City of God if he lives a life according to the flesh-according to man (a bad will.) Augustine reinforces the ideal of faith in the infinite God so that the finite man can move closer to God. Augustine also writes "But because God foresaw all things and was therefore not ignorant that man also would fall, we ought to consider this holy city in connection with what God foresaw and ordained, and not according to our own ideas, which do not embrace God's ordination." Here Augustine reaffirms God's omniscience, (foresaw all things) and the divine plan or idea of order. He also writes that man's own ideas (reason) are not embraced by God, that man is closer to God when man has faith.

13, 14

Competencies Developed;
1,2,3,4,5,6,7,8,9,13,14,
15,17,18

IDS II
UNIT II - PART I
STUDENT PAPER

THEOLOGICAL HUMANISM

In the writings of Peter Abelard, a Theologian and teacher of the 11th century, one may see the beginnings of the theological humanism of the Renaissance. Prior to that a theological cosmology primarily based on the teachings of St. Augustine had believed in the "primacy of faith." In other words, man was to accept his lot in life, without question, as the will of God. To question his fate, or the world itself, could only lead to sin and thus was discouraged and condemned. In contrast, though he never took a personal stand, Peter Abelard, through his studies and writings exposed contradiction within and questioned the theological works of the time, and thus subjected theology to rational scrutinization. His endeavors were not appreciated at the time and he suffered much criticism and suspicion. But for the first time, in a thousand years, questions were posed as to the true nature of mans' ability to reason and the position it held in a theological cosmology. 5

It was to take two hundred years before the world would be ready to accept and assimilate plausibilities presented by Abelard. St. Thomas Aquinas is credited with the synthesization of human reason and faith. It was he who first effectively combined early Greek and Roman rationalism with the theological viewpoint. He convinced the church that there was no conflict between the two since he considered mans' intellect a special gift of God to be utilized as a means of discovering Him. With Aristotle's philosophy and the scriptures as his basis, he, in, essence showed how reason and faith coincided, since by means of reason faith could be aspired to. Aristotle believed in cause and effect and St. Thomas agreed. He projected as the primary cause, God, or in his words, the Prime Mover. He held that God was indeed the initial force from which all else came. The "rational tendency" for all things to reach their ultimate end was the essence of this premise, and since reason was based on a sequence of cause and effect, the search for the ultimate cause was in effect, the natural search for God. As he says in "Summa Contra Gentiles," "Therefore, to understand God is the ultimate end of every intellectual substance." 5,7

Among his observations he concluded that there are three types of knowledge; practical, speculative, and divine. And, as stated in "Thomas Aquinas," Aquinas held that nothing in revelation is contrary to reason, but some things in revelation are not rationally demonstratable."

This concept had tremendous impact on society of the day. Human reason was at last liberated. Elevated to a noble status; that with the potential purpose to discover God. With thought trends changing, more emphasis was placed on early Greek and Roman rationalism as opposed to their roles in theological history and the fate of their cultures.

Coinciding with these changes in thought was the enlargement of the world by means of the Crusades and a new accessability. Trade between the East and West, provided for the first time a new economic system, capitalism. Where before, classes were limited to only the rich and poor, the need for a middleman, the merchant, provided a middle class. A man could direct his own financial status. Exposure to new cultures and ideas provided new outlooks for the thinking man. And Greek and Roman ideologies became ever more influential in early Western thought.

Among the first seen was the use of mathematics. As artists departed from medieval portrayals which were primarily for the purpose of teaching theological lessons, to a more aesthetic, individual expression of worldly situations, perspecitive, thus geometry and mathematics became important. Realism called for the study of anatomy as well. Artists were the inventors, the architects, the scientists of the day 9

The message was still the same but the focus had changed. Still was the deep belief in God, in a Creator, in a Master Plan, but at the center of the perspective was man, and the world he lived in. And as the focus changed to a more worldly view, the need for a more realistic portrayal of it demanded a study of the available sciences. Men again wanted to learn. They wanted to learn more about themselves, more about God. This portrayal of the human aspect, the human participation, the human endeavor in Gods' creation was essentially a reflection of theological humanism. 14

Competencies Developed:
1,2,3,4,5,6,7,8,9,13,14,15,
17,18

IDS II
Unit II - Part II
Student Paper

THEOLOGICAL HUMANISM

Mans' Attempt to Synthesize Faith and Reason

Theological Humanism began after a medieval period of 700 to 800 years, when the beliefs of St. Augustine dominated. St. Augustine's theological cosmology, based on faith and revelation, became obsolete for some men who began to explore their capacity to reason. During the medieval period the church was the authority over men, philosophy was frowned on as any disease would be, and art was centered around religious dogma. But then educated men, scholars familiar with Greek and Roman ideas, were developing this capacity for reason which could not be denied. The old school of theology (thought) forbid them the freedom to rationalize their faith, so a new view became necessary, combining views and traditions of St. Augustine with knowledge and reason as defined by Aristotle. This synthesis or combining is a change which allows for both the theological person who based his life on faith and the educated religious individual who has need for rational explanations. It is a compromise which forms a better, stronger, more uniform outlook. This synthesis is a sign of growth and change, essential elements in a religious world view.

7, 15

A theological world view is one organized through belief and faith in God. Belief in this God and seeing him as a creator is essential. The Creator is characterized by attributes, such as omniscience, omnipresence, and omnipotence and by his claim to a creation. Starting from this basic view, St. Augustine developed a concept that man must give up his human tendencies and have no interest in his material world. St. Augustine feels that man's interest in himself will draw him away from God. A man who reasons, in St. Augustine's eyes, is heading towards the sin of pride and becomes enslaved to evil. To St. Augustine faith was the only road to freedom from evil, the only path to knowledge, the only way to God.

Bearing Augustinian Theology in mind, Peter Abelard, several centuries later, decided to contrast the inconsistencies in this theology. In "Sic et non", Abelard demonstrates the contradictions within the cosmology of St. Augustine. He shows how St. Augustine's theology of faith is not unified, and tries to develop some unity. Abelard was educated and represented a social shift towards a thinking society. As people became better educated new avenues of thoughts opened up. This was process of growth which necessitated a bridge between the old theological view and the needs of that society. To prepare for this bridge Abelard came to realize there were two separate forms of reasoning, two sides to combine and connect.

Abelard saw that there was a universal and a particular. He challenged the authority of the Church and said the universal "exists but only in the individual." He saw that all men shared human nature and by understanding himself man could rationalize the existence of God. Abelard saw reason as a gift of God, as did St. Augustine. But unlike Augustine, Abelard believes that man should not be afraid to subject his world to scrutiny. Scrutiny would only lead to further understanding and understanding would bring man closer to God.

This paved the way for St. Thomas Aquinas' concepts. St. Thomas, who also studied Aristotle's philosophy, wanted to distinguish between the truth discerned by human reason and that imported by revelation. This distinction would serve to solidify the bridge between faith and reason, the thoughts of Augustine and Abelard and Aristotle. To accomplish this synthesis, Thomas divides knowledge into a three part hierarchy. This hierarchy consisted of practical knowledge dealing with the material organization of the world and how it works; speculative knowledge of why things are what they are, a more abstract approach, and finally Divine knowledge, a metaphysical concept (beyond man's world) obtained by faith. This hierarchy makes room for reason. Practical and speculative knowledge, which are defined by reason were accepted by both schools of thought and were seen as a gift of God. Thus society was given enough leeway necessary to expand on knowledge of this world. Through Divine knowledge the idea of faith, key to the other world with God its illuminate source, is retained. St. Thomas, who extracts much from Aristotle defines love as the motivating force of the universe.

Religious views were not the only changes which came to light during this period, later named the Renaissance. As man became interested in his world, his economic outlook also changed. Man became important and so man's life took on greater meaning. Histories documenting the lives of men were invented.

Feudalism shifted into capitalism, creating new frontiers for all men. Developments appeared in the arts and sciences--

especially reading, writing, and math--which were offspring of the investigation of thought. Man now had the opportunity to appreciate himself, and economically better himself. The creation of middle class and the challenge of moving up in the physical world enhanced this religious view. Schools were created for math as well as theology, and a surge of knowledge began to flow, freely, emancipating reason.

This time is a switch from a strict "other worldly" view to a combination of the "other worldly" (heaven) and "this worldly" (nature and the physical world). In the Renaissance these two combine to compliment each other and balance each other, just as Thomas balanced the reasoning of men with the faith men place in God and his abilities.

The shift to a "this worldly" view was characterized by certain elements (common denominators) included in many of the works produced by writers, artists, scientists and philosophers of the Renaissance. Math and geometry were foundations of reasoning for scientists seeking man's place in the universal scheme of things, as well as for artists who grew from the conceptual to an optical approach to painting. Three dimensional art and motions in the systems of planets and stars were now being produced with heavy dependency on the mathematical formulas necessary to express factual images. Emphasis on realism and naturalism were evident in the Renaissance through these technical calculations.

Another characteristic of the Renaissance was the new revival of Greek and Roman literature, sciences, art, philosophy and architecture. The Renaissance saw the revival of logic and ethics. Plato and Aristotle were studied by many and the Greek and Roman ideals were giving rebirth to a full use of mans abilities to understand himself. Man's dignity became evident as he began to look at himself. Man developed a sense of individualism and selfesteem. He was no longer dictated to by an authority such as the church but thought out his own personal philosophy and moral code. Philosophers were once again venerated. Man was appreciating the magnificent creature he was. The fact that God gave man the ability to move upward or downward, by his own free will--a gift of Godset man apart from all other creations. It was such a view that produced the enthusiasm and optimism generated through the Renaissance.

14, 15

It was in truth through art and science that man began to fulfill his wish to understand himself, his world and his place in the universal scheme of things. The time of Renaissance flows with the riches of art, science, and thought but all begins and ends with the prime mover, the center of love--or creator, who is never completely understood but (through faith) is believed in.

To further illustrate the Renaissance and to exemplify its essence, a look at some examples of the period is necessary. In the "Oration on the Dignity of Man" Pico maps out the stages and steps in the new order of man's existence. Pico sees man as the center of an individual universe. Pico quotes: "What a great miracle is man". He is quoting Trismegistus, a Greek author and he agrees that man is a truly magnificent creature, different from the former view which enslaved man to God and the authority of the church. Pico goes on to explain that he can't see man as a familiar to the world or the Gods but places much greater importance on man when he says, "by the acuteness of his senses, the inquiry of reason, and the light of his intelligence, he (meaning man) is the interpreter of nature."

By giving man the status of interpreter, Pico frees man to choices never before open to him. Man has reason, reason to choose his direction, and in his abilities for predetermination man exemplifies God's greatest gift--free will. This differs from the medieval gift of grace, and grew from Thomas's idea that grace and reason were Gods gift to man. Pico truly dignifies man as he speaks of man's free will. "Impeded by no such restrictions may by your own free will, to whose custody we have assigned you, trace yourself the linements of your own nature".

The Renaissance's quest for self knowledge and man's need for natural explanation runs all through the writings of Pico. Optimism, another major characteristic of the Renaissance is also reflected. Mans ability to understand himself, "to be what he will be", gives him peace and mobility as well as great stature. Mobility thru choices follows stages according to Pico. The following is an example of the directions man can choose from. Starting with lowest stages:

> "If negative he will become plant
> if sensual he will become brutish
> if rational he will reveal himself a heavenly being
> if intellectual he will be an angel and the son of God
> and if dissatisfied with the lot of creatures...
> he would recollect himself into the center of his own
> unity."

Pico draws a clear view of what man can be, he can go upward and downward as he himself chooses.

> "Upon man God bestowed seeds pregnant with all possibilities the germs of every form of life."

According to Pico man can surpass even the angels, who lack man's mobility and are fixed, and go on to be one with God. Never before had anyone placed man in so high an esteem, never before could man feel so optimistic and enthusiastic about himself. Because the possibilities were no longer confined and limited, possibilities now expanded through knowledge to God himself. Pico attributed this mobility, as did most Renaissance artists, to the moving energy of love. Power over men comes from this force and was even the reason man was first created.

> "Great is the Power we attain by loving"

and about creation:

> "This work...done, the Divine Artificer still longed for some creatures which might comprehend the meaning of so vast an achievement, which might be moved with love at its beauty and smitten with awe at its grandeur."

In Pico's beliefs, God then created man for appreciation of the world and its beauty with abilities to understand the world. The quote suggests learning, growth, reason and development of a creature toward understanding of a creator. What other motivation would a father have to create beauty for its offspring than love? This love is so great the offspring can move towards the creator elevating itself to unite to the creator.

Evidence of Renaissance in Pico illustrates man's new dignity in having the possibilities of achieving divine knowledge. Pico illustrates a drawing to antiquity as he quotes Greek and Roman authors. Individualism in man is expressed to further illustrate the tendencies of thinking during Renaissance. Freedom from supremacy of church authority is demonstrated by giving man free will. Yet Pico does keep his cosmology in line by stating that peace is an achievement of reason. That nature could breakdown inconsistencies man found hard to deal with and that synthesis between nature and theology would create peace. He kept his philosophy new and yet acceptable by having science and theology compliment each other: 13

> "Unshakable peace, To bestow such peace is rather the privilege of the queen of sciences, most holy theology. Natural philosophy will at best paint the way to theology."

The "other world" being theology and science being "this world" are married as one when Pico states concerning.

The next example of Renaissance to view is "La Primavera" by Botticelli. This painting also drew from the ancients. It is an "Allegory of Spring" drawing on the ideas of change present in the Metamorposes by Ovid. Botticelli depicts the stages Pico describes moving from Eros, lust, to philos, brotherly love, to Agape, love of god.

The Allegory depicts (starting from right and moving left) the god of the West Wind Zephyr lusting after Chloris, a nymph once of great beauty now aging. His lust changes to love and he prays that she may have eternal life and beauty. This moves us to level two where Chloris became Flora, the goddess of flowers. The first representation of Chloris is almost nude, aging and in the stage of change she has leaves coming from her lips. As Flora she is clothed and represents brotherly love. The center of the picture is Venus. Once again we see a representation of man pregnant with seeds of possibility. Venus also drawn from ancient writing of the Gods is made to look like the Virgin Mary. This draws a contrast and shows that man as an individual is central to the universe and the authority of the church is challenged. Venus' son Cupid flies blindly above--for the arrows of love have no predestined target but are blind. The Virginal Venus is set back as though you walked from darkness to the light to see her, this followed the pattern of earlier 8, 9 architecture and the trees curve around Venus' head as though in Arch, another reflection on antiquity. The three graces dance to Venus' right representing Pico's angels: Seraphim (love) Cherubim (wisdom) and Thrones (justice) lead us to God. Mercury to the left of the portrait is at the highest level of the Renaissance philosophy he looks up through the trees to God. Through Venus man can move in either direction. From the center back down to the beastial level of animal lust or up to the divine level of Mercury. Her head tilts towards Mercury's direction optimistically and her likeness to Mary although somewhat blasphemous can mean a synthesis between intellect (for Venus represented liberal thinking) and theology. Her impression which is peaceful therefore shows the achievement of the successful blending of both faith and reason. Botticelli and Pico therefore both run together impressing parallel ideas and ideals; two examples of Renaissance spirit. Botticelli also used mathematical techniques to bring a natural look and thorough dimensionalism to the art. Naturalism was also in the details of toes, grass and small objects not before incorporated in conceptual art. The painting is optical and appealed more to the physical senses.

The last look taken of the age is Copernicus, who is a scientist-philosopher. Never really accomplishing a proven discovery, Copernicus expresses the Renaissance spirit by using reason to point out the inconsistency of the astronomical sciences. As Abelard pointed to these discrepencies in theology, Copernicus now did so in the natural world. Copernicus took ideas in De Revolutionibus, his work, from the ancient writings of Ptolemy, in the Almagest. He also referred to antiquity by modeling his thoughts on Aristotle. He never really made a revolutionary breakthrough but paved the way for such a breakthrough. As Thomas Kuhn said of Copernicus' work:

6,15

> "The book is revolutionary-making rather than a revolutionary text."

Copernicus used examples of mathematical fallacies and logic to argue against the status quo way of depicting the universe. One such argument follows:

> "For first the mathematicians are so unsure

> of the movements of the sun and moon that they cannot even explain or observe the constant length of the seasonal year."

> "Thy use neither the same principles and hypothesis".

Copernicus argues against the lack of formula and feels that the mathematicians forget to observe when figuring their theories. He calls for reformation in these techniques:

> "he uses the 'supposed nature of motion' as an argument of logic to the men of his day as well."

Copernicus shifts the belief that Earth is the center of the universe and places the sun more at the center. Using the argument of Aristotle on parallax, he used his eyes to determine the distance between the stars and Earth and changed the universal scheme of things. This belief went against church teachings and man's ego. In the end it was hard to get accomplished but Copernicus, in the spirit of his day, was concerned with truth, realism, and natural order. As Kuhn said:

> "he was little concerned about the difficulties that his innovation would present to normal men whose concerns were predominantly terrestrial."

Copernicus also brings out the dignity of man when he makes a shift in universal law, but his belief in an all-powerful God allows him to synthesize what he sees in "this world" to the "other world" which has no earthy limitations.

> "now authorities agree that Earth holds firm her place at the center of the universe and they required the contrary unthinkable."

Copernicus here demonstrates his acceptance of the popular belief and also his understanding that they are limiting themselves. By giving man the ability to go beyond earthy limits and still be his own individual center he frees science for new horizons and creates scientifically and philosophically endless possibilities to man and this world." Thus dignifying man.

Therefore, all three sought their own truth in different ways using art and science and philosophy to find mans place in the universal scheme. They were among the branches of the Renaissance rich with the fruits of thought and achievement. They began with a creation, man and reason his ability to learn and grow toward the source of all love itself, God. 18

Competencies Developed;
1,2,3,4,5,6,7,8,9,11,13,15
16,17,18

IDS II
UNIT III
STUDENT PAPER

Reformation

The Reformation was a religious uprising against the Catholic ideas of indulgences, and against the idea that man could not achieve everlasting life without the intercession of the Catholic Church. Indulgences were assurances of the soul's escape from Purgatory into heaven. They were purchased in great faith from the clergy. Dogma dictated that only through the Church could man's soul be saved.

Martin Luther was a monk living in Wittenburg, Germany. A great Biblical scholar, he gradually came to believe that the Church was wrong, and this led him to write the *95 Theses*. Within the theses, he outlined his grievances with the Church. Included in his outline were his beliefs that indulgences were not found in Scripture. "They preach only human doctrines who say that as soon as the money clinks into the money chest, the soul flies out of purgatory." Luther followed his theses with his writing *The Freedom of a Christian*. Within this writing, Luther divides man into an inner and outer man. The inner man, or soul, he contends needs nothing but the Word of God. "One thing, and only one thing, is necessary for Christian life, righteousness, and freedom. That one thing is the most Holy Word of God." The outer man, Luther said, could utilize good works, not to get to heaven, but to discipline the body. "Thus what we do, live, and are in works and ceremonies, we do because of the necessities of life and of the effort to rule our body. Nevertheless we are righteous, not in these, but in the faith of the Son of God..." Thus, Luther basically maintained that man was capable of achieving righteousness because of God's gift of Holy Scripture. No other works, such as indulgences, could do any more than simply having faith in God's word.

An out-growth of the Reformation movement, was the music utilized during worship services. Each Sunday had it's own Gospel message. The hymns assisted the worshippers in understanding each message. Also, the basic faith in God's gift could be reinforced through the use of verse and song. Within the fourth verse of *A Mighty Fortress*, by Martin Luther, there is a prime example of reinforcement of faith:

16

That word above all earthly powers
  No thanks to them, abideth;
The Spirit and the gifts are ours
  Through him who with us sideth.

The hymn's lines seem to be saying that no matter what Catholic dogma purports as truth, the gift of everlasting life is available to all, free of charge.

The music and the writings of Martin Luther were the beginning of the Reformation. Its simple belief in the saving of man's soul through faith alone, and not through works, such as indulgences, was the theology of the Reformation.

Counter-Reformation

As the spread of Protestantism progressed, the Catholic Church felt compelled to re-establish itself as the One, True Church. The Council of Trent set down the exact beliefs of the Church. The main points were that souls could only be saved through the intercession of the Church, that the Catholic Church was the One, True Church, and that the ultimate goal of man was to submit his will to that of God. The pinnacle to strive for was a mystical union with God.

One of the most useful tools the Church had, was a man named St. Ignatius of Loyola. Originally a military man, he became a priest, and formed the Society of Jesus, or Jesuits. The Jesuits checked the spread of Protestantism, and served to spread the Catholic religion all over the world. As a helpful way to learn to meditate, he wrote the Spiritual Exercises. The first section of the work was a four-week meditation guide to assist the worshipper in his attempt to submit his will to that of God's will. "...seeking and finding the will of God with respect to the ordering of one's own life and the salvation of one's soul, are Spiritual Exercises." The second section dealt with the tenets of the Church. "The ninth to uphold all the precepts of the Church and not impugn them."

11

16

There were other influences on the Catholic faith, such as the Autobiography of St. Teresa of Avila. Within her book, Teresa describes the mystical union with God, and its benefits to the earthbound soul. "One who has experienced this (rapture) will understand... the soul feels close to God..." She further explains how the soul reacts after the rapture. "This becomes very evident in the little weight now given by the soul to earthly matters...The soul has no desire to seek or possess any free-will..." This was an admirable state to be in, according to the Church, and it was what man should strive for.

Another way for the Church to exert its influence, was through it's art. The artwork must appeal emotionally, dogmatically, and allegorically. One such example was the baldachino in St. Peter's Basilica in Rome. The canopy type structure rises 90 feet toward the dome, and is enrobed in bronze. It sits over what is traditionally considered to be the final resting place of St. Peter, the rock on which Jesus started his Church. The canopy represents the Arch of the Covenant which was in the Old Testament. The sheer size, location, and design were intended to reinforce the ideas that the Catholic Church was the One, True Church, and the continuity to back that claim.

The Counter-Reformation relied on its art and clergy to maintain and spread the Catholic ideas of submitting the will to God, believing the Catholic Church as the One, True Church, and working toward a mystical union with God as the ultimate goal in life.

Competencies Developed:
1,2,3,4,5,6,7,8,9,13,15,16
17,18

IDS II
Unit IV
Student Paper

THE OLD IDEA OF STATE

The mind and heart of the state is the ruler. All power is his and he is responsible for all. Thus, the old idea of state is embodied in one man, either ordained by Divine Grace or Right, or by his own ability. The ruler is the state.

Machiavelli wrote *The Prince* as a handbook to guide an individual to a successful rule. He tells how a wise Prince may gain power and keep it. "His aim in *The Prince* was to describe the rules of power politics based on an analysis of history," (Introduction to *The Prince*, by Daniel Donno, p. 7).

Machiavelli, through his positions as an administrator and a diplomat in the chancellory of the Florentine Republic, studies firsthand for 15 years how a state functions. Being well-versed in the classics was one of the qualifications for his job, so we may assume he was well-educated for his time (early 1500's). Through his job he travelled extensively and became acquainted with many leaders throughout Italy and had opportunities to observe foreign rulers as well. *The Prince*, in part, was modeled after Cesare Borgia.

Machiavelli wrote *The Prince* because he was distressed by the manner in which his country was being overrun through foreign invasion and by the ineptness of its rulers. It is his effort to contribute something viable to his country which he confessed he loved "more than my soul." He is prepared to lose his soul for his country's sake and he supports that belief with another: that political action should be freed from moral considerations.

The Prince is important as it clearly sets out to show that the rulers were supreme over the land, and the common man was just that: common. The common man was to be contented with his lot in life, that is, being subordinate to the prince and to the wishes of the prince. The state was first; it was to be preserved to keep the order. The common man wanted to be left alone, to be kept secure in his trade and with his family. This suited the nobles for they wanted the power to control the events and the people.

9-17, A synthetic essay drawn from ideas contained in Political Science, Drama, and satire

13, 15, 16, Paper in general calls for a demonstration of these competencies.

Machiavelli saw human nature was being characteristic behavior of human beings in a given situation and that it is predictable. He bases this on his observations while engaged in political life and through his discourses with the common man while in his retirement. He says this is the way it is, not how it might be. Machiavelli makes several assumptions about human nature: that man is changeable; that man can support or disrupt the natural order; that man is good/bad; and that it is human nature to be motivated by self-interests.

Machiavelli asserts that man is changeable and promotes his own self-interests. "For this can be said about the generality of men: that they are ungrateful, fickle, dissembling, anxious to flee danger, and covetous of gain. So long as you promote their advantage, they are all yours, as I said before, and will offer you their blood, their goods, their lives and their children when the need for these is remote. When the need arises, however, they will turn against you." Machiavelli is talking about whether the prince should be loved of feared, much as the age old religious question: should God be loved or feared? In the Biblical sense love is all-consuming, a complete state of being; fear is thought to be "awe", for God is awesome (fearsome), awe-inspiring (fear-inspiring). Fear is to "stand in awe of", in apprehension, with an eye-askance. Now, if a prince were to be feared, then necessarilly he should be of this kind, for from this kind of fear, his subjects would come to respect the prince and to know their limits. This would lead to the subject's heightened sense of belonging, thus loyalty to the prince would surely follow in the events to transpire. The fear would turn to tempered love and the prince, as long as he sets the limits and gives good example, should be able to exercise control over his subjects. He then has less trouble maintaining his hold on his principality. Without this fear, or awed respect, the prince could find his subjects following his leadership in times of plenty, but then when an ill wind blows he can expect to find his subjects changing positions, and not keeping the prince's best interests for the state foremost. This individual's motivations are selfish, greedy, thus, "...it is far safer to be feared than loved."

In speaking of how the princes lost their states, Machiavelli says that were less prepared for possible storms that might arise that they should have been. "No one should ever allow himself to fall down in the belief that someone else will lift him to his feet, because is will not happen; or if it does happen, it will not prove to be to his advantage." Should one fall, and should another help him, the helper is probably doing it thinking of what he will get in return for his deed. Man does not do things out of goodness, but with an eye to what it will bring him, therefore, he has a good/bad nature, and his own self-interests at heart.

Man's nature is to support or disrupt the natural order, and since the natural order is for the prince to rule he should endeavor to rule wisely and to have the support of his subjects. To keep the populace contented rather than insolent, Machiavelli advises the prince to "...delegate unpopular duties to others while dispensing all favors directly themselves. I say again that a prince must respect the nobility, but avoid the hatred of the common people." By so doing, man will be more inclined to support the natural order according to Machiavelli.

In Machiavelli's secular concept of the state, separation of church from state is a given. He says that the prince should not be bound by moral considerations and he can do whatever is necessary to preserve order. The prince may be hypocritical, and is encouraged to change his nature as well. Machiavelli cites the fox and the lion as beastial examples for man's nature, for the prince to assume as the need arises. He says "the fox is adept at recognizing snares and the lion is skilled in driving off wolves" that each is adapted for a particular role. "It follows, then, that a wise prince cannot and should not keep his pledge when it is against his interest to do so and when his reasons for making the pledge are no longer operative. If all men were good, this would not be a bad precept, but since they are evil and would not keep a pledge to you, then you need not keep yours to them. ...But one must know how to mask this nature skillfully and be a great dissembler. Men are so simple and so much inclined to obey immediate needs that a deceiver will never lack victims for his deceptions." The prince should never concern himself with the strict moral considerations; the prince should weigh the possibilities, including those considered deceptive and come to his decisions knowing, even if he has taken and about-face from a previous stance, it is in the best interests of the state's preservation to do so, "But he should preserve a disposition which will make a reversal of conduct possible in case the need arises.... As I have already said, he must stick to the good so long as he can, but, being compelled by necessity, he must be ready to take the way of evil." Therefore, the prince is not to feel bound by religion, faith, or mercy, for the preservation of the state is of prime importance.

According to Machiavelli a state is a system of governing people and is derived from certain assumptions about human nature and the way the world works. The state rises and falls on the ability of the prince. In the secular world man creates this ability and from the divine he obtains support, as he is brought to the princehood through Divine Right. "Only Marcus lived and died with honor because he came to the purple by right of succession and owed it neither to the soldiers nor to the people." Machiavelli is writing of Marcus Aurelius' ability to keep his soldiers and his people happy and because of their support, and also because he became emperior through his birthright, Marcus was able to live out his life without threat of insurrection. For a prince who may have become one through his own ability, Machiavelli proposed that, "The task will not be difficult if you will keep before you the lives and deeds of those I have just named.... There is a great readiness here, and where there is great readiness, there can be no great difficulty, so long as your house will seek to emulate those whom I have proposed as models."

Though Machiavelli writes The Prince for Lorenzo de Medici, this advice is for any prince. He wants a strong government coming from the prince with the order clearly established, for chaotic conditions have prevailed in Italy for too long. Unrest and instability cannot be tolerated and in order to maintain the order in the realm, he suggests that the prince follow a clear-cut path or action. One of the surest methods the prince should employ to this end is to study history and to glean from the triumphs and mistakes of others principles to guide him in his own rule. Machiavelli says that a Prince should always be ready for war, and the way to do that is to cultivate the natives' readiness and willingness to fight for their own state, for they will be a better army than mercenaries or auxillaries.

The good/wise prince should be slow to believe what he hears and slow to act, though he stresses that the prince should act not react. He should demonstrate prudence and moderation; cultivate counselors who are capable and loyal for he will be reputed wise or foolish by his selections. "It may be noted, on the other hand, that when princes have given more thought to fine living than to arms, they have most their states. The first cause of losing them is the neglect of this art, just as the first means of gaining them is proficiency in it." Administering a state is an art, says Machiavelli, and he gives much advice on how this should be accomplished. "Generally, men judge by the eye rather than the hand...all men will see what you seem to be; ...it is the result that renders the verdict...Let the prince conquer a state, then, and preserve it; the methods employed will always be judged honorable, and everyone will praise them." Therefore, as was previously mentioned, the prince should bring into play his dual nature of the fox and the lion.

Macbeth was a Scottish general on his way home from battle when he came upon three witches who tempted him to upset the natural order in order to become king. Macbeth was written by William Shakespeare, a playwright who came to understand the workings of others professions through observation and the gathering of facts and information from others. Shakespeare was a historian of his time (1564-1616), reporting events in his plays. He had been an actor during his days in London as well as a dramatist. He later returned to Stratford, where he purchased a house and lived until his death. In Macbeth Shakespeare gives us a study in evil, and an examination of man's nature and how it can be misdirected; how evil affects man when he chooses it as his good.

Macbeth is important because of the study of characters and their motivations and by contrasting and comparing Macbeth to Machiavelli's advice to a prince, we can see that Macbeth did not follow advice of this kind.

Shakespeare was an observer of life and human nature and establishing God he believed as did his conterparts that there is a natural order that should not be upset, but that man will interfere for his own gain, for man is greedy and ambitious.

When Macbeth meets the witches he hears their prophecies, and a short time later one is made known to him as being true. He begins to wonder if the third prophecy, that he will become king, can be made to come true. Macbeth was a hero in control, known as "nobel Macbeth, but then Macbeth begins to change, for man's nature is changeable.

After King Duncan names his son Prince of Cumberland, which made him heir to the throne of Scotland Macbeth exclaimed, "Prince of Cumberland! That is a step on which I must fall down, or else o'erleap, for in my way it lies." Macbeth recognizes an opportunity to seize the moment when Duncan arrives at his house as his guest, and so does Lady Macbeth, who is extremely ambitious for her husband. They ploy to murder Duncan, and in so doing they go against the natural order of events, promoting their won self-interests, and Machiavelli says man will do. Shakespeare further demonstrates Machiavelli's contention showing how Macbeth has failed to inspire love or fear for him, but only a sense of danger. Macbeth goes through drastic personality changes and is not a calm man. This does not go unnoticed and slowly but surely the nobles begin to shift from Macbeth's side to an opposing, but safer position. At the end, Macbeth stands alone, deranged by his overconfidence in a false interpretation of the witches prophecies. "I bear a charmed life, which must not yield to one of woman born," he says feeling invincible but out of touch, out of control.

Machiavelli spoke of not letting yourself fall down for no one will help you up. Lady Macbeth tells Macbeth, prior to Duncan's murder but during the plotting of it, to "bear welcome in your eye, your hand, your tongue; look like the innocent flower, but be the serpent under't." She mean that is it out of necessity he should be deceitful, for if he fails in this undertaking no one else will or can do it for him. She urges hims to act, not react, a constant theme form Machiavelli. This also illustrates that she is his confidant, his counselor. Whether she is wise is debatable, but she is loyal to his cause: that of becoming king.

Machiavelli advises delegating some authority and dispensing favors directly. As the end of the play, Malcolm has regained the throne of Scotland and is addressing his supporters: "We will not spend a large expense of time before we reckon with your several loves and make us even with you. My Thanes and kinsmen, henceforth be Earls, the first that ever Scotland in such an honor named...So thanks to all at once and to each one, whom we invite to see us crowned at Scone." Malcolm recognizes his men and rewards their loyalty justly, then given an invitation to join in a celebration of regaining Scotland and being able to return order to their beloved state.

A prince should have a dual nature, that of a fox and of a lion. We find in Malcolm such a trait. When Macduff leaves Scotland to ally himself with Malcolm to rid Scotland of Macbeth's tyranny Malcolm is mistrustful initially and tells Macduff that, "But, for all this, when I shall tread upon the tyrant's head or wear it upon my sword, yet my poor country shall have more vices than it had before, more suffer and more sundry days than ever, by him that shall succeed." Macduff is horrified and says that he would prefer to leave his beloved bleeding Scotland forever. Malcolm is convinced that Macduff is not a traitor, informs him he has been a fox in attempting to locate his allegiance and then becomes a lion in establishing his true intentions for Scotland. "My first false speaking was this upon myself." He has shown his willingness to deceive in order to find the true nature of another's intent, and the deceit is alright for he has the interest of the state foremost. Macbeth himself has acted to preserve Macbeth; Malcolm's interest is in the preservation of the state.

We see that Machiavelli and Shakespeare come to similiar conclusions regarding human nature and the state. Both say Man is both good and bad, that through observation of others we can see a predictable course of cause and effect in relationships, and see them borne to conclusion. If a prince or ruler acts wisely, the preservation of the state is first, by whatever means deemed necessary including deceit and treachery. We see that gaining control is easier than maintaining control, and that maintaining control is an art to be practiced by the ruler, who is the state. Whether by Divine appointment (Shakespeare) or individual ability and nature.

THE NEW IDEA OF STATE

The new idea of state is a system of governing people based on certain assumptions about human nature and the way the world works. The task is self-government through the ability of the people to chart their own destiny to protect the life and property of its citizens.

John Locke wrote "An Essay Concerning the True Original Extent and End of Civil Government" in 1690. He outlined the state of nature, spoke of property, political or civil society, the beginnings and ends of society and government, the extent of legislative power and of tyranny.

John Locke was an English philosopher, the son of an attorney; well-educated and for some years in public service to his country. Locke also spent time in exile, as did Machiavelli, but was able to return to England and a minor political post after the overthrow of the Stuart king, James II, and the establishment of parliament over the throne. His last years were devoted to theology wherein his philosophy was deeply rooted.

John Locke's essay is important because it leads the way from absolute power vested in one individual to power invested in the majority: the people. His work is the basis for western thought today, and was a primary source material for the American colonies' "Declaration Independence." Locke takes us from the method of government of Machiavelli to the concept of sovereignty of the people.

According to Locke the state of Nature is uncertain, unsafe, and insecure. He says that man is born free and equal; he is free to conduct his own affairs and to participate in the affairs of state; and that man has the ability to reason using common sense. Man is guided by the moral law of God. He says man is essentially good, loving, helpful, bestowing benevolence upon one another.

"The state of Nature has a law of Nature to govern it...no one ought to harm another in his life, health, liberty or possessions." Locke is talking about the uncertainties of man's life, but that man should use his reasoning abilities to assure that another comes to no harm. It is a "state of liberty...not of license," and each individual has the right to live as safely as possible.

"The natural liberty of man is to be free from any superior power on earth, and not to be under the will or legislative authority of man, but to have only the law of Nature for his rule." Locke is not saying that man should live as he chooses and not be tied by laws; he is saying that man is bound by rules he sets, through a majority opinion; that man should conduct his affairs and those of the state accordingly and under the law of Nature. Again, man should reason these things for the betterment of the majority.

"God, who hath given the world to men in common, hath also given them reason to make use of it to convenience." Locke means that through our reason we can make good use of the things placed here for man by God. He says we all have common rights to the things placed here and that we should not waste anything, for then it is against Nature and consequently against our fellow man as he may have need also. No one has an exculsive right to anything, though when an individual begins to attach his labor to something in Nature, then he is making it his property through his labor.

Locke asserts that man is born free and in a state of "equality, wherein all the power and jurisdiction in reciprocal, ...without subordination of subjection." He means that one does not have anymore right than another, that one is not to be under another, and that one is to operate on a give-and-take proposition. The right of the individual are to freedom, to conduct his own affairs and to participate in the affairs of state.

According to Locke the new concept of state is that the power comes from the people. Man is driven to society (to join a common wealth) and when he does he loses his individuality but he gains protection, strength through majority decision, and order. When he forms a community the governed give direction, make laws and make punishments.

"For, when any number of men have, by the consent of every individual, made a community, they have thereby made that community one body, with a power to act as one body, which is only by the will and determination of the majority...The act of the majority passes for the act of the whole...the power of the whole." Locke believes that when men come together they are capable of governing themselves. They do this through a majority concensus after each person has decided that this is in the best interests of all. The community is the arbitrator of disputes, and the majority is the decision-making body. In order for his system to work the people have to become active citizens.

"The great and chief end, therefore, of men uniting into commonwealths,...is the preservation of their property." In so doing, Locke contends that man should establish through majority decision some laws for the common good, have indifferent judges to uphold the laws and then establish a power to carry the laws and punishments through, thereby providing for the protection of one's property and to establish peace, safety and the public good.

"There remains still in the people a supreme power to remove or alter the legislative, when they find the legislative act contrary to the trust reposed in them." There is a contract between the government of the community and the people of the community. When this contract is violated Locke says the people have the right to vote for a removal of those who are in violation. This power given the government is a trust, but the people are the supreme power in guarding against that trust being violated. The people are the final judge in this.

In Candide Voltaire is making fun of the old state and how it operates and is promoting the idea of the new state. Candide is everyman, and in this novel Voltaire is hoping to remodel European culture and human nature. Dr. Pangloss, Candide's Teacher, is a complacent optimist who does not accurately reflect reality, nor does he encourage active citizenship.

Voltaire (1694-1778) was a famous poet and playwright, historian and an advocate of science. He was staunchly against superstition because he believed that bigotry makes one unhappier than need be. A lot of his life was spent in exile, for his writing found disfavor with those in power. With Candide he sweeps illusions aside and exposes the world as indifferent but understandable place in which to live.

Candide and Cacambo are about to be roasted and eaten for a murder they've committed while in another country and done under a misunderstanding of that country's customs. Cacambo calls upon natural laws of nature, citing, "natural law teaches us to kill our neighbor" in his defense, concluding, "But if I've told the truth, you're too well acquanted with the principles of international law, morality and justice not to spare our lives." This demostrates that in a natural state human nature is uncertain, insecure and unsafe. Man needs more to guide him, and Candide begins to show us the ways of Locke.

While Candide is talking with the Baron about marrying his sister, Cunegonde, he tells him, "Dr. Pangloss always told me that all men are equal, and I will certainly marry her." Candide believes, like Locke, that if man is equal, then he is necessarially free. With this freedom man can do what he chooses to do. Candide chooses to marry Cunegonde and the notion that there should be one above him, subjugating him, is not realistic to him. This is his reasoning, and he believes also that God has given him this ability also.

"We must cultivate our garden." Candide says, and Martin said "it's the only way to make life bearable." They have travelled the world over, have seen ElDorado and they have returned to settle their own farm. They have joined together guided by moral law and found that their true nature is of being good to each other, working together, cultivating the good for each and all. They reason that their liberty hinges on the concept of sharing for the common good, that no other is more important than the individual who brings his labor and talents to the tasks. They may not be able to do much about the rest of the world, but they can come together in their own small way for their own good.

"We must tend our garden." Candide and many others have come together to form a community. They are learning to govern themselves, to stand as one body. They work together for the common good. They have had a vote, to remove the baron and his idea of the way things should be run, and the majority has the rule, rather than one person. It was through their power that this community was established, and as Locke believes man can govern themselves, Voltaire is demonstrating.

Both Locke and Voltaire agree that nature can be uncertain, unsafe and insecure. They feel man is in need of adding to this condition, making changes and improving upon the old attitudes. They feel that as man comes to prove he is free, of equal worth, and capable of reasoning he will do so by assuming the power of governing himself through making his own laws, finding objective judges and having the laws administered. A government with three branches, in trust to the people, with the majority rule in effect. The cause would be a democracy, with liberty, justice and protection the gain. Each individual would be free to Tend the Garden, to be an active voice and participant.

When we compare the idea of the old state with the new state we can see that agreement is reached regarding human nature thusly: that man is not good, he has a dual nature, is motivated by greed and his own self-interests. As for how a state should be run both concepts are interested in the welfare of the state, and the interests of the state. They are both interested in the welfare of its citizens. The state provides for peace, prosperity and protection.

When we contrast the states and human nature, we find that regarding human nature the old idea feels that the ruler is of prime importance and that man is to be manipulated by the ruler. In the new state the individual is important, is born free and therefore equal to others. The ruler in the new state is subject to the wishes of the majority, and if he breaks the trust, he can be removed and replaced. In the old state the ruler was thought to rule by Divine Law or Right, and the people were imposed upon by the ruler. Man did not take part in the rule of his country, he only served his country. In the new state, man not only makes the laws he had direct control over how the country is run.

The significance of the old state vs. the new state is that the old was interested in the preservation of the power base of the ruler and the new state's chief end was preservation of property and the individual and his rights.

Competencies Developed:
1,2,3,4,5,6,7,8,9,10,11,
13,15,16,17,18

IDS II
UNIT V
STUDENT PAPER

THE CREATIVE PROCESS OF SCIENCE

The creative process of science came about as the result of some questioning inidviduals not willing to accept opinion as fact, not willing to believe in the myths and superstitions of their predecessors but who were carefully searching out the "facts"for themselves and doing so in such a manner that these new methods of discovery became the foundation of the scientific method. This new scientific method used five basic steps in its process. The steps are to "recognize a problem," to formulate an "hypothesis," to predict the outcome," to "experiment to prove the hypotheses," and to "formulate the simplest theory that organizes the whole in logical and orderly fashion." Galileo did this when he "discovered" that a needle would float in water...previously it had been believed on sound "philosophical scientific opinion" that metal being heavier than water, it would immediately sink yet no one had taken the time to check this out. No one questioned it until Galelio. Kepler was another scientist who used a scientific method somewhat differently. He "hypothesised" a solution, "experimented"to prove it, discovered a discrepancy between his "hypotheses" and "fact" and decided to let the "facts" lead to a logical conclusion after "experimenting." Kepler did not define a problem until his "hypothsis" did not lead (after experimenting) to the conclusion he was looking for... Both Galileo and Kepler relied on the exactness and provability of mathematics to explain their scientific work and to ensure that others would come to the same conclusion they believed that mathematics had to be the cornerstone of science.

Sir Francis Bacon divorced science from superstition, theology, and ancient philosophy. He describes in the Novum Organum (1620) "the new method of true science in opposition to older methods beclouded by phanthoms, or 'idols', of the mind." He is credited with "demanding certainty" and "affirming that science reaches its conclusions by induction, finding general truths in particular instances" and further his "plea for observing facts without preconceptions" which "makes him the most revered spokesman for science in the Renaissance." In Novum Organum #29 he states "In sciences founded on opinions and dogmas, the use of anticipations and logic is good;" and #31 "Its is idle to expect any great advancement in science from superinducing and engrafting of new things

6

16- Paper asks for a demonstration of this competency.

upon old. We must begin anew from the very foundations," and by these two statements Bacon establishes that the science founded on "opinions" and "dogmas" cannot be used for a new science and leads him to #36 "One method of delivery alone remains to us; which is simply this: we must lead men to the particulars themselves, and their series and order while men on their side must force themselves for awhile to lay their notions by and begin to familiarize themselves with facts." Bacon has separated the "old from the "new" and developed a scientific method that omits previously held philosophical, theological, mythical, and superstitious beliefs in favor of starting with no opinion but keeping an open mind so that the facts considered in an orderly fashion and in a small a particular as possible will lead to an overall concept which can then be applied to a broader classification. Thus, using Bacon's scientific method you would remove the old idols and start with fact, the fact of particulars lead to the creative process of science which leads to the laws of force and motion and established the technology and foundation for modern physics.

Rene Descartes came to similar conclusions as Bacon. Descartes discovered that various cultures imposed a variety of concepts on the different people of the world. Since these cultural differences have such an influence on the individual man within that culture and yet are subject to change as the time and culture dictates... Descartes concluded that the same man was influenced by cultural opinion instead of by the search for truth as the search for truth would be universal. And therefore the search for truth would lead to universal fact and should be logical and simple in its method. In the process, Descartes came up with four rules to follow: I. "Never to accept anything as true unless I clearly recognized it to be so: that is, carefully to avoid haste and prejudice and to include nothing in my conclusion unless it presented itself so clearly and distinctly to my mind that I had no occasion to doubt it." II. "Divide each of the difficulties which I encounter into as many parts as possible, and as might be required for an easier solution." III. "To think in an orderly fashion beginning with the things which were simplest and easiest to understand, and gradually and by degrees reaching toward more complex knowledge, even treating as ordered materials which were not necessarily so." IV. "To make enumerations so complete, and reviews so general that I was certain that nothing was omitted." Descartes relies on the simplicity and logic of mathematics, and he credits math (the method of arithmatic) with enabling him to reason in all things. He states: "What pleased me most about this method was that it enabled me to reason in all things, if not perfectly, as least as well as was in my power." In the process of his search for the truth Descartes quickly eliminated a series of "traditional facts" for lack of evidence to support it until he finally came up with one unquestionable truth "I think, therefore I am" and he started with that as his "first principle of the philosophy I was seeking." From that point he finally reasoned that "it was a greater perfection to know than to doubt." Both Descartes and bacon separate fact from opinion, use a logical and orderly process to obtain fact, rely on the mathematical method and provability, and credit universal laws with making fact "fact"--whether presented in Italy, Germany, France, Holland, or China. A fact is universal therefore it has more validity than culturally influenced and changeble opinion."

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From the ground work of men like Kepler, Galileo, Bacon, and Descartes who separated the world of "philosophy," tradition," "superstition," "idols," "culture," "religion," and "opinion" from the field of science, science now had a firm foundation based on fact and derived from a logical process known as the scientific method. On this foundation Sir Isaac Newton stood while formulating his three laws of motion.

Newton concluded that the universe had certain definable laws that could be fundamentally understood by man and through careful analysis and observation a universal conclusion could be reached. He believed that God created the universe with a plan and that while man could not know the internal mechanics of the world and space he (man)could trust in God to maintain the motions of the planets and the laws of gravity. In the "Mathematical Principles of Natural Philosophy" Newton defines such things as "motion", velocity", "mass", "space", and "time" and he defines space, time, and motion as being either absolute or relative. Absolute space is all space that is space while relative space is the space one body occupies in comparison to another body. Absolute time is the present moment while relative time is an external measure used by man to keep track of events. Absolute motion is the motion that is universal while relative motion is the motion of one body as compared to the motion of another body either stationary or in motion comparable one to another. From that Newton formulated three laws: I. "Every body continues in its state of rest or in uniform motion in a right (straight) line, unless compelled to change that state by forces impressed upon it." II. "The change of motion (acceleration of a mass) is proportional to the motive force impressed; and is made in the direction of the right (straight) line in which that force is impressed." III. "To every action there is always opposed an equal reaction; or, the mutual action of two bodies upon each other are always equal and directed to contrary parts." These three laws are universal and can be proven by mathematical formulas.

Bacon, Descartes, and Newton based their scientific method on facts and did away with the old concept of science in the process. From that time on a new method following logical steps and provable by anyone was used. Moreover, scientists could now base their work on preceeding fact and reacher to higher horizons.

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